

**PROPOSITION 65  
AIR QUALITY IMPACTS FROM  
ELECTRONIC CHROME & GRINDING COMPANY, INC.  
9128 Dice Road  
Santa Fe Springs, CA 90670**

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PES Job #4201.010/Disk #25

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## CHAPTER 1

### SUMMARY

Electronic Chrome & Grinding Company, Inc. (Electronic Chrome) performs hard chromium plating on industrial rolls, hydraulic cylinders, and miscellaneous parts. Electronic Chrome has seven hard chrome tanks. Tank #7 was not used in 1991 and 1992; tank #5 was used for only four months in 1992. The normal operating schedule is 1 shift/day, 5 days/week, and 52 weeks/year. Chrome plating was conducted occasionally during the weekends.

Among the utilized chemicals, only hexavalent chrome is on the Proposition 65 list, the Safe Drinking Water and Toxics Enforcement Act of 1986 lists. Hexavalent chrome emissions are reduced by fume suppressant, polyballs, and scrubbers and then discharged into the atmosphere through stacks.

The United States Environmental Protection Agency (USEPA) conducted source tests on one of Electronic Chrome's exhaust stacks during the week of February 17, 1992. The objective of the source test was to evaluate the performance of the packed-bed scrubber. USEPA made a mistake in the draft report. The corrected hexavalent chrome emission rate was therefore used in the impact analysis.

Pacific Environmental Services, Inc. (PES) was retained for purposes of Proposition 65 to calculate estimated downwind exposures, if any, from Electronic Chrome's emissions. The Industrial Source Complex Short Term Dispersion Model 2, Version 92062 (ISCST2) was used for the analyses. Simulations were conducted for the 1992 calendar year (January 1, 1992 through December 31, 1992).

BRZWAKE, a software product of Trinity Consultants, Inc., was used to assess the directional building dimensions. The directional of building widths and heights were incorporated into the ISCST2 input file to assess the building downwash effects.

Annual average ambient air toxic concentrations were utilized to quantify the community and work place exposure levels. Using the annual average concentration was based on the California Air Pollution Control Officers Association (CAPCOA) Air Toxics "Hot Spots" program Risk Assessment Guidelines. Proposition 65 defines lifetime exposure as the reasonably anticipated rate of exposure for an individual to a given medium of exposure measured over a lifetime of seventy years.

The community exposure levels in  $\mu\text{g}/\text{day}$  for hexavalent chrome showed the highest potential health risk of  $0.0646 \mu\text{g}/\text{day}$ . The impacted area extended about 600 meters east of the Electronic Chrome property boundaries. However, the impacted area contained only industrial facilities and a few residents.

## CHAPTER 2

### INTRODUCTION

In order to determine whether public notification was appropriate for Electronic Chrome & Grinding Company, Inc. (Electronic Chrome), pursuant to Proposition 65, the Safe Drinking Water and Toxics Enforcement Act of 1986, Pacific Environmental Services, Inc. (PES) established the area in which exposure might occur. Proposition 65 identifies two major chemical categories: carcinogenic toxicants and reproductive toxicants. For cancer causing chemicals, Proposition 65 identifies a criteria exposure level called "no significant risk level" (NSRL) expressed in  $\mu\text{g}/\text{day}$ . The NSRL is an exposure level which will cause no more than one excess case of cancer in an exposed population of 100,000 assuming a 70-year lifetime exposure. For reproductive toxicants, a no significant effect determination is based on "no observable effect level" (NOEL) at 1,000 times the exposure in question.

PES was retained to calculate projected exposures from Electronic Chrome's emissions in the surrounding community, if any. PES used the Industrial Source Complex Model, Short Term, Version 92062 (ISCST2), representative meteorological data from the South Coast Air Quality Management District (SCAQMD) Pico Rivera monitoring station, and model options acceptable to SCAQMD to quantify downwind air toxic concentrations. Model printouts show period concentrations at all receptor points. The period average refers to the entire meteorological data period processed.

Electronic Chrome conducts hard chrome plating on various parts. Hexavalent chrome emissions are generated as by-products from the plating process. Electronic Chrome has seven hard chrome plating tanks and four emission control systems. Tank #7 was not utilized at all in 1991 and 1992; tank #5 was used for only four months in 1992. The ampere usage of each tank was recorded daily pursuant to SCAQMD rules. The normal operating schedule was 8 hours/day, 5 days/week, and 52 weeks/year. Plating was performed occasionally during the weekends.

USEPA conducted source tests on the stack exhaust of Tank #8 during the week of February 17, 1992. A draft report was published dated December 4, 1992 (Appendix A). The objective of the tests was to evaluate the chrome removal efficiency of the packed-bed scrubber when operating with and without a foam blanket and polyballs. It is shown from the source tests that use of foam blanket and polyballs could induce a 97.77% decrease to the scrubber inlets.

The only toxic chemical which Electronic Chrome used and discharged from the Proposition 65 chemical list was hexavalent chrome. Hexavalent chrome is a carcinogenic toxicant. Pursuant to 22 CCR 12707, hexavalent chrome presents no significant risk of cancer by route of ingestion. Therefore, inhalation was the only exposure pathway considered in this impact report.

Hexavalent chrome was discharged into the atmosphere through four different exhaust stacks (Figure 2.1). Two of the exhaust ducts had horizontal discharge while the other two had a downward discharge. For the purpose of model simulation, a vertical exhaust of 0.01 m/sec was used for each of the four stacks.

For regulatory application, a building is considered sufficiently close to a stack to cause wake effects when the distance between the stack and the nearest part of the building is less than or equal to five times the lesser of the height or the projected width of the building. For downwash analyses with direction-specific building dimensions, wake effects are assumed to occur if the stack is within a rectangle composed of two lines perpendicular to the wind direction, one at  $5L_b$  downwind of the building and the other at  $2L_b$  upwind of the building, and by two lines parallel to the wind direction, each at  $0.5L_b$  away from each side of the building. Where  $L_b$  is the lesser of the height and projected width of the building for the particular direction sector.

BRZWAKE, a building downwash analysis software of Trinity Consultants, Inc., was used to assess the direction building dimensions. Trinity Consultants, Inc. advises that BRZWAKE utilized a conservative algorithm to perform the building downwash analysis. The BRZWAKE computer printouts of the directional building heights and widths (Appendix B), were included in the ISCST2 model input files.

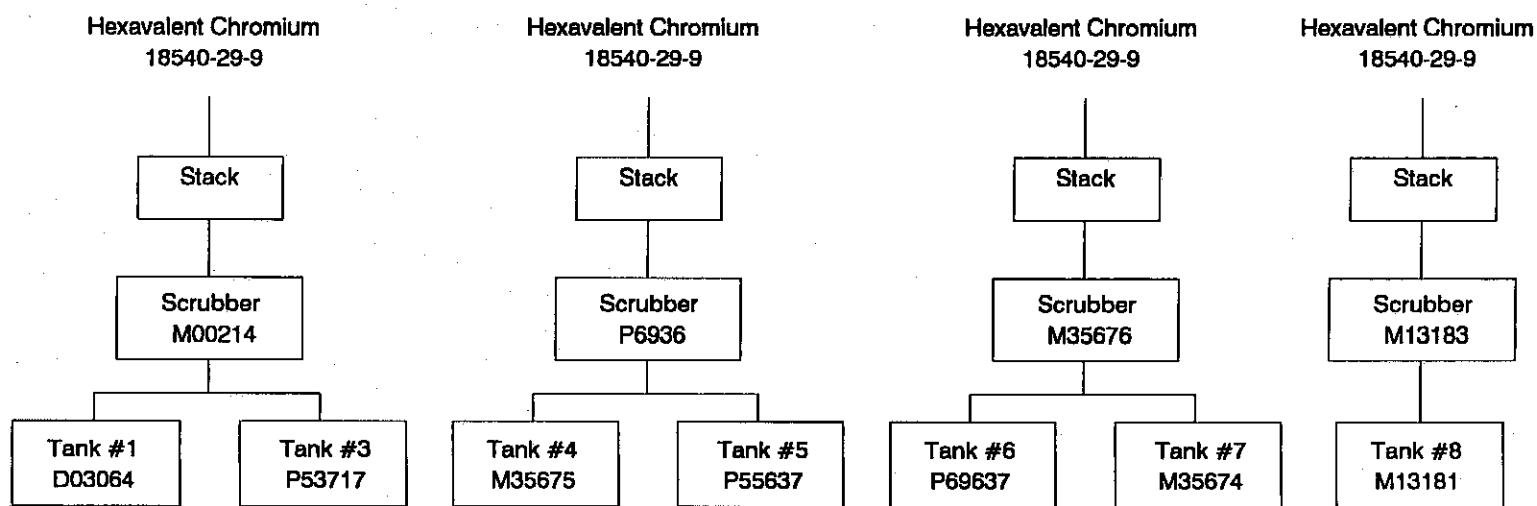
The coordinates of the closest industrial/commercial, residential, and sensitive receptor were included in the model input file as discrete cartesian coordinates.

Annual average ambient air toxic concentrations were utilized to quantify the community and work place exposure levels. Using the annual average concentration was based on the California Air Pollution Control Officers Association (CAPCOA) Air Toxics "Hot Spots" program Risk Assessment Guidelines. Further, Proposition 65 defines lifetime exposure as the reasonably anticipated rate of exposure for an individual to a given medium of exposure measured over a lifetime of seventy years.

The chemical specific ambient concentrations ( $\mu\text{g}/\text{m}^3$ ) were converted to the Proposition 65 community exposure levels ( $\mu\text{g}/\text{day}$ ) by multiplying the default amount of air (20  $\text{m}^3$  per day) inhaled by an adult and comparing with the chemical-specific NSRL. For work place exposures, each exposed worker inhales 10  $\text{m}^3$  of work place air per eight-hour day, forty hours per week, fifty weeks per year over a forty-year period. By definition, there is no health risk if the chemical-specific exposure level is less than the NSRL.

The individual cancer risk at each receptor location was estimated by comparing the chemical specific exposure level to the NSRL. For example, if the ratio were 10, there would be 10 excess cancers per 100,000 (100:1,000,000) population due to facility activities.

Figure 2.1  
Tanks, Scrubbers, and Stacks Configuration



2-3

## CHAPTER 3

### EXPOSURE ASSESSMENT METHODOLOGY

#### SOURCES AND OPERATING SCHEDULES

Hexavalent chrome was released to the atmosphere through four exhaust stacks. The plot plan of the four point sources and associated buildings is depicted in Figure 3.1. The heights of the four stacks are 5.79 meters (19 ft). The origin of the coordinate system is located at the southwest corner of the building. The exhaust stack parameters are assumed to be identical as summarized in Table 3.1.

For the carcinogenic toxicant, hexavalent chrome, the actual facility-wide emission was assumed to be evenly distributed over 24 hours/day and 365 days/year. In other words, the shop was assumed to be operated 24 hours/day and 365 days/year. It was also assumed that one-quarter of the total emissions was emitted through each exhaust stack. The ISCST2 model point source input data are listed in Table 3.2. The centroid of the coordinate system was located at the southwest corner of the 9132 Dice Road building. Stacks 1 and 3 were downwind discharge; stacks 2 and 4 were horizontal discharge. Stack 2 discharged to the south direction; stack 4 discharged to the east direction.

Because of the linear relationship between the chemical emission rate (g/sec) and the associated ambient air concentration ( $\mu\text{g}/\text{m}^3$ ), a unit emission rate (1 g/sec) was used for model input. The predicted concentrations could then be obtained by multiplying the actual chemical-specific emission rate by the concentration due to 1 g/sec.

#### RELEASED CHEMICALS AND THEIR EMISSION RATES

EPA conducted source tests on Electronic Chrome's exhaust stack from chrome Tank #8 during the week of February 17, 1992. EPA published the test result on December 4, 1992. Cr<sup>6+</sup> emission rates are listed in Table 3.3 and used in this impact report.

The average emission rate of runs 4, 5, and 6 (emissions with the fume suppressant and polyball control measure) was  $8.167 \times 10^{-3}$  mg/AH. The ampere-hour usage of each plating tank is summarized in Table 3.4 by month for 1992. The total ampere-hours used during 1992 was 35,467,028 AH/yr. The total Cr<sup>6+</sup> emission rate was therefore:

$$35,467,028 \text{ AH/yr} \times 8.167 \times 10^{-3} \text{ mg/AH} \times 1 \text{ g}/10^3 \text{ mg} = 289.66 \text{ g/yr}$$

Figure 3.1  
Facility Plot Plan For Electronic Chrome & Grinding Company, Inc.

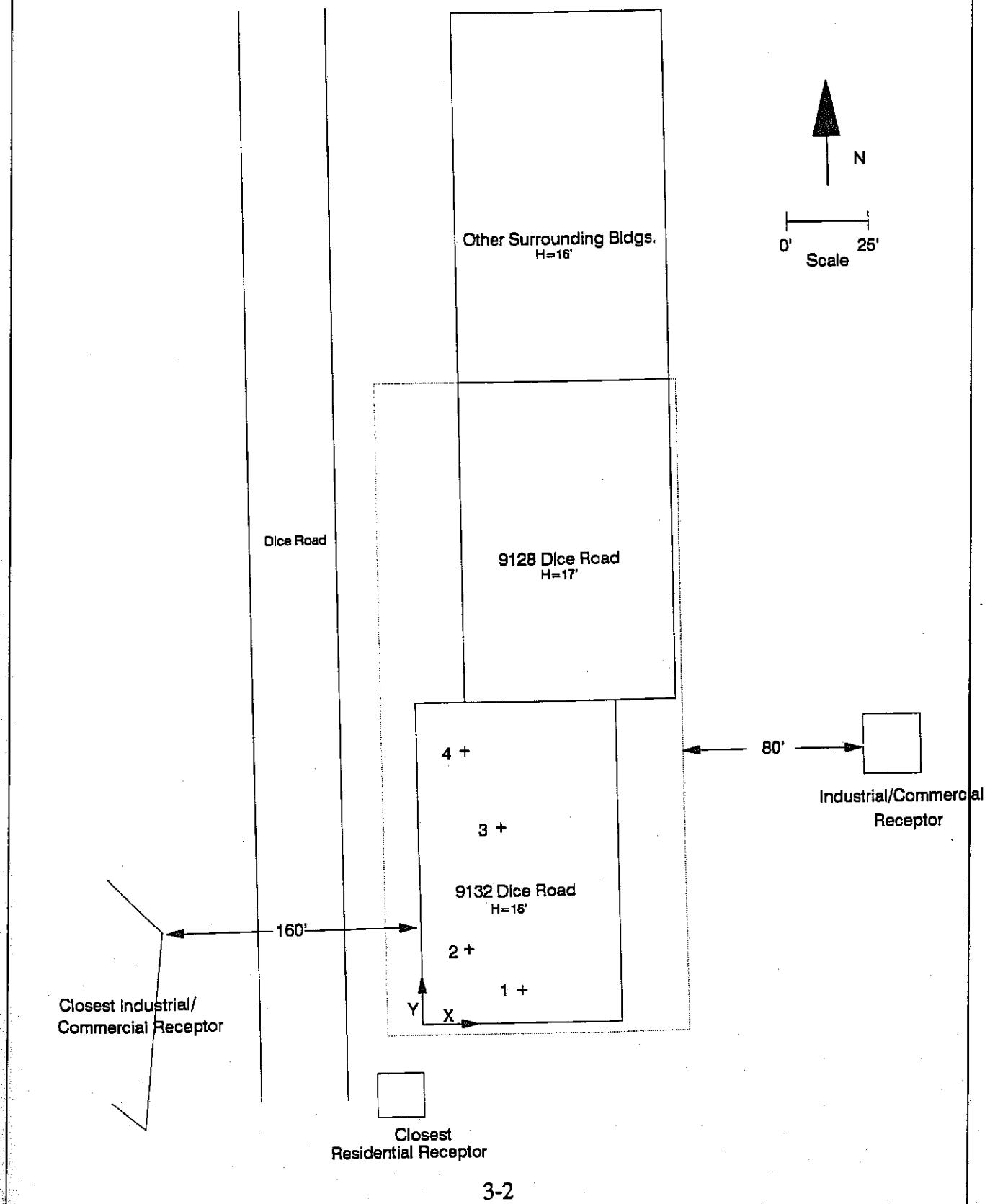




Table 3.1  
Exhaust Stack Parameters

	Stack Parameters*
Stack Height Above Ground	19 ft (5.79 m)
Exhaust Velocity	0.01 m/sec**
Stack Inside Diameter	2 ft (0.61 m)
Exhaust Temperature	70°F (294°K)

\* All four stacks have identical exhaust parameters

\*\* Horizontal/downward discharge

**Table 3.2**  
**Point Source ISCST2 Model Input Data**

Point Source	Emission Rate (g/sec)	X (meters)	Y (meters)	Base Elevation (meters)	Stack Height (meters)	Stack Temperature (°K)	Stack Exit Velocity (m/sec)	Stack Diameter (meters)	Notes
Stack 1	0.25	18.59	5.49	0.0	5.79	294	0.01	0.61	Downward discharge
Stack 2	0.25	6.40	8.23	0.0	5.79	294	0.01	0.61	Horizontal south discharge
Stack 3	0.25	12.80	19.51	0.0	5.79	294	0.01	0.61	Downward discharge
Stack 4	0.25	5.79	27.74	0.0	5.79	294	0.01	0.61	Horizontal east discharge

Table 3.3  
EPA Measured Cr<sup>6+</sup> Emission Rate

Run Number	Test Condition	Outlet Cr <sup>6+</sup> (mg/amp-hr)
1	WOFB/PB	4.74 X 10 <sup>-2</sup>
2	WOFB/PB	7.68 X 10 <sup>-2</sup>
3	WOFB/PB	6.22 X 10 <sup>-2</sup>
4	WFB/PB	8.70 X 10 <sup>-3</sup>
5	WFB/PB	7.90 X 10 <sup>-3</sup>
6	WFB/PB	7.90 X 10 <sup>-3</sup>

WOFB/PB - Without foam blanket and polypropylene balls

WFB/PB - With foam blanket and polypropylene balls

**Table 3.4**  
**1992 Ampere-Hour Usage Log**

Month	Plating Tank Number						
	#1	#3	#4	#5	#6	#7	#8
January	613,849	74,128	641,654	346,154	486,093		249,547
February	422,146	88,344	540,231	580,779	641,472	-	524,782
March	542,617	80,677	353,288	9,869	256,480	-	143,121
April	533,010	125,085	332,308	0	369,969	-	24,498
May	551,835	81,261	233,876	0	239,823	-	6,925
June	560,970	91,333	671,668	0	381,427	-	93,961
July	406,478	102,224	284,801	0	610,466	-	106,138
August	1,039,515	483,637	1,328,732	0	1,412,094	-	1,408,717
September	686,884	342,629	582,368	0	977,054	-	1,125,917
October	1,056,352	199,973	388,590	0	286,905	-	670,999
November	1,004,023	562,145	1,099,879	0	1,520,132	-	1,387,534
December	1,202,665	0	1,411,791	40,431	1,681,299	-	1,163,476
<b>Subtotal</b>	<b>8,620,344</b>	<b>2,231,436</b>	<b>7,869,186</b>	<b>977,233</b>	<b>8,863,214</b>	<b>-</b>	<b>6,905,615</b>

Total Annual Emission Of Hexavalent Chrome =

$$35,467,028 \text{ AH/yr} \times 8.167 \times 10^3 \text{ mg/AH} \times 1 \text{ lb}/454,000 \text{ mg} = 0.638 \text{ lb/yr}$$

Since the chrome emissions were assumed to be evenly distributed over 24 hours/day and 365 days/year, the emission rate in g/sec becomes:

$$289.66 \text{ g/yr} \times 1 \text{ yr}/365 \text{ dy} \times 1 \text{ dy}/24 \text{ hr} \times 1 \text{ hr}/60 \text{ min} \times 1 \text{ min}/60 \text{ sec} = 9.185 \times 10^6 \text{ g/sec}$$

Because of the linear relationship between the chemical emission rate (g/sec) and the associated ambient air concentration ( $\mu\text{g}/\text{m}^3$ ), a unit emission rate (1 g/sec) was used for model input. The predicted concentrations could then be obtained by multiplying the actual chemical-specific emission rate by the concentration due to 1 g/sec as shown below:

$$\text{CONC } (\mu\text{g}/\text{m}^3) = \text{ER} \times \text{UCONC } (\mu\text{g}/\text{m}^3)$$

Where:

CONC = Predicted actual downwind concentration

UCONC = Predicted downwind concentrations released from stacks due to 1 g/sec

ER = Chemical specific emission rate:  $9.185 \times 10^6$

## AIR DISPERSION MODEL PARAMETERS

ISCST2 was used to evaluate the facility's impact at downwind receptor locations. ISCST2 was recommended by the USEPA and the California Air Pollution Control Officers Association (CAPCOA) for refined risk assessment in flat terrain. SCAQMD recommended model options were used as shown below:

- URBAN Dispersion
- Final Plume Rise
- Stack-tip Downwash
- Buoyancy-induced Dispersion
- Not Use Calms Processing Routine
- Not Use Missing Data Processing Routine
- Default Wind Profile Exponents
- Default Vertical Potential Temperature Gradients

## METEOROLOGICAL DATA

Meteorological data for 1981 from the SCAQMD Pico Rivera station was used for ISCST2 model analysis. The surface station number was 53134. The upper air station number was 91919. Meteorological data were pre-processed using a FORTRAN program provided by SCAQMD.



## AVERAGING TIME

The averaging time for carcinogenic toxicants is annual average. Annual average exposure concentrations of carcinogenic toxicants were calculated from the period concentrations by multiplying by an adjustment factor. The period concentrations refer to the average for the entire meteorological data period processed. The ambient carcinogenic pollutants concentration for the non-production time frame would be zero. However, Electronic Chrome was assumed to be operated for 24 hours/day and 365 days/year. The adjustment factor was, therefore, 1.0.

## BUILDING DOWNWASH

The surrounding buildings were depicted in Figure 3.1. There are one-story buildings located to the east, west, and north directions of the exhaust stacks. BRZWAKE, a software product of Trinity Consultants, Inc., was used to assess the directional building downwash dimensions. USEPA guidance on the determination of downwash structures was not well established. Trinity Consultants, Inc. warranted that BRZWAKE utilizes a conservative, while simple, method to determine downwash structure. Based on the BRZWAKE algorithm and Figure 3.1, required building dimensions were incorporated into the ISCST2 model input file.

## RECEPTOR LOCATION SELECTIONS

The model-generated polar grid system and sets of discrete receptors were used to quantify the downwind ambient airborne toxics concentrations. Because of the small emission rates and building downwash effect, the exposed areas for most of the released chemicals would be located close to the building stacks. Therefore, the grid systems were designed to have a high resolution near the facility. The polar regular receptor grid system consisted of 36 radials (one for every 10 degrees of azimuth) and were centered at the southwest corner of the plating building.

The polar grid system had eight downwind ring distances for a total of 288 receptors. The downwind ring distances were 50, 100, 150, 200, 250, 400, 500, and 1,000 meters. The coordinates of the closest industrial/commercial receptor, closest residential receptor, and closest school were included in the model input file (Table 3.5).

## COMMUNITY AND WORK PLACE DAILY EXPOSURE LEVEL

To convert ambient air toxic concentrations into daily exposures, a default assumption contained in Article 7 of the Proposition 65 regulations was utilized. It was suggested that an adolescent (10-18 years of age) or an adult (18+ years of age) inhales 20 m<sup>3</sup> of air per day over a 70-year life span. The Proposition 65 community exposure level along the downwind direction can be obtained by the following formula:

Table 3.5  
Coordinates Of The Closest Commercial/Industrial, Residential, and Sensitive Receptors

Closest Receptor	Coordinate (Meter)	
	X (East)	Y (North)
Commercial/Industrial	54.9	30.5
Residential	-5.5	-6.1
School	0	1,100



$$\text{Community exposure level } (\mu\text{g/day}) = \text{CONC } (\mu\text{g/m}^3) \times 20 \text{ (m}^3/\text{day)}$$

Where

CONC = Annual average ambient concentration as calculated for the actual emission rate

Pursuant to Proposition 65, industrial worker exposures in the work place can be adjusted from the community exposure to account for a working lifetime of 8 hr/day, 40 hr/wk, 50 wk/yr for a 40-year period. Each exposed worker inhales 10 m<sup>3</sup> of air per each eight hour working day. Because a 70-year exposure period and 20 m<sup>3</sup> of inhalation air were assumed in the community exposure level calculation, a multiplying factor is the ratio of the working lifetime and 10 m<sup>3</sup> inhalation air to the 70-year lifetime and 20 m<sup>3</sup> inhalation air.

$$\frac{10 \text{ m}^3/\text{day} \times 5 \text{ day/wk} \times 50 \text{ wk/yr} \times 40 \text{ yr}}{20 \text{ m}^3/\text{day} \times 365 \text{ day/yr} \times 70 \text{ yr}} = 0.1957$$

#### NO SIGNIFICANT RISK LEVELS AND NO OBSERVABLE EFFECT LEVELS

The Proposition 65 cancer risk level which represents the no significant risk level (NSRL) is one excess case of cancer in an exposed population of 100,000 people (equivalent to 10:1,000,000) assuming a 70-year lifetime exposure. The NSRL for hexavalent chrome is shown below:

No Significant Risk Level - Carcinogenic Toxicants		
Chemical Name	CAS #	NSRL ( $\mu\text{g/day}$ )
Hexavalent Chromium	18540-29-9	0.001

## CHAPTER 4

### PROPOSITION 65 IMPACTS

#### EXPOSURE LEVELS

Community exposure levels in  $\mu\text{g}/\text{m}^3$  for hexavalent chrome emissions were calculated.

Areas in which the exposure level is greater than the NSRL is called an impacted area (excess cancer risk  $> 10:1,000,000$ ). The isopleths were plotted and superimposed with local streets. Two figures were generated by a utility software SURFER, a product of Golden Software, Inc. Kriging interpolation method was used to create the isopleths. The cancer risks estimated for both regular polar grid points and for discrete rectangular grid points were utilized to plot the isopleths.

#### COMMUNITY AND WORKER EXCESS CANCER RISK

The cancer risks for the maximum exposed individual and worker individual plus the residential, commercial, and school receptor points are summarized in Table 4.1. The worker exposure levels were calculated by multiplying 0.1957 times the calculated community exposure levels. The calculated maximum exposure levels also are listed in Appendices D and E. The receptor locations are expressed in the polar coordinate system with the origin located at the southwest corner of the 9132 Dice Road building. The angle in degrees was measured clockwise from the north.

The community and work place excess cancer risks are plotted in Figure 4.1 and Figure 4.2, respectively. Because of the prevailing wind direction, the affected area is primarily in the northeast-southwest direction from the plating shop.

The impacted residential area is primarily located along Altmar Place but includes any residents inside the 10:1,000,000 isopleth on Figure 4.1. There are no schools in the impacted area. The impacted industrial area includes all workers located inside the 10:1,000,000 isopleth in Figure 4.2. Fortunately, much of the impacted area is now vacant.

Figure 4.1  
Residential Cancer Risk Isopleths  
(10:1,000,000)

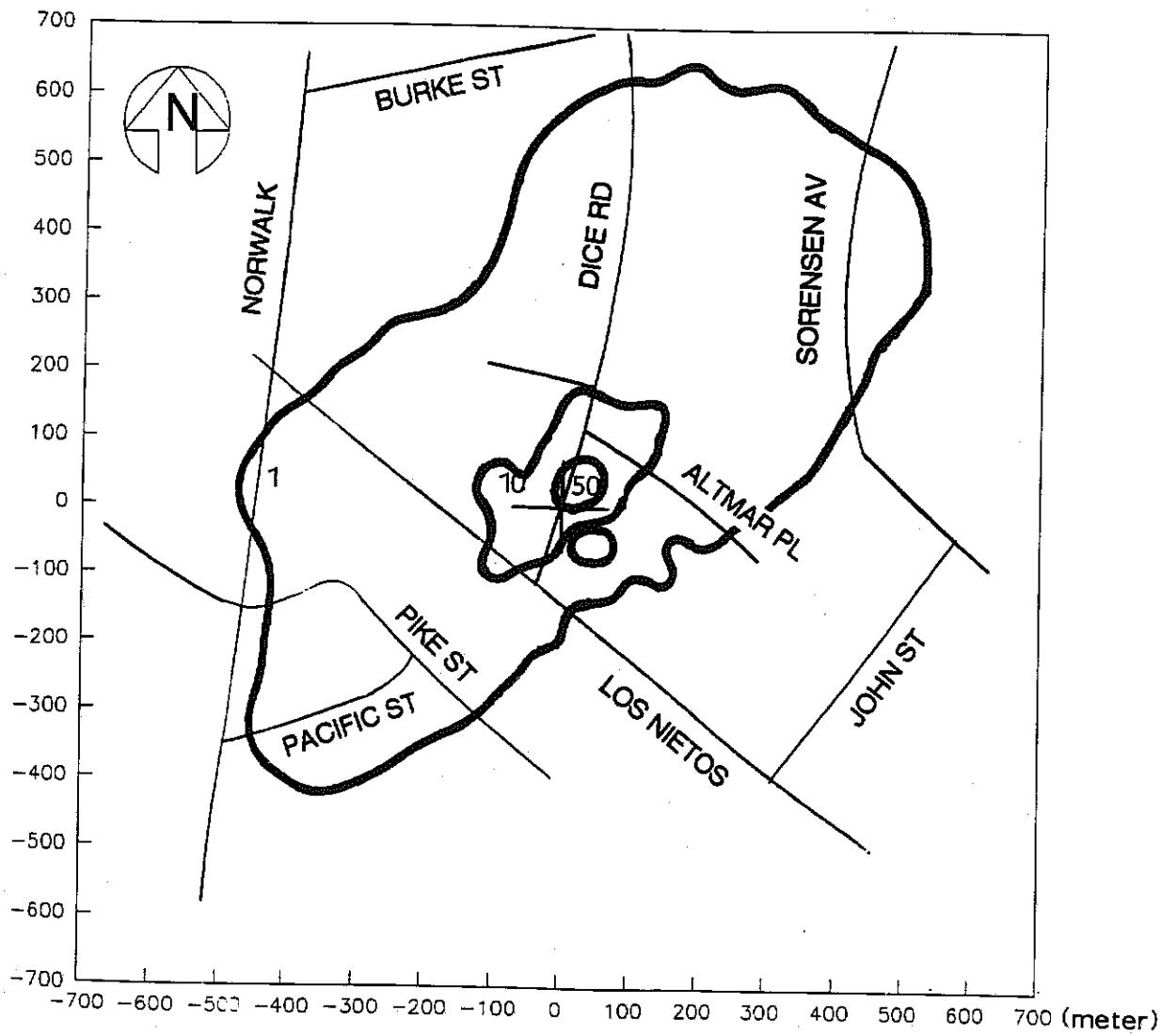
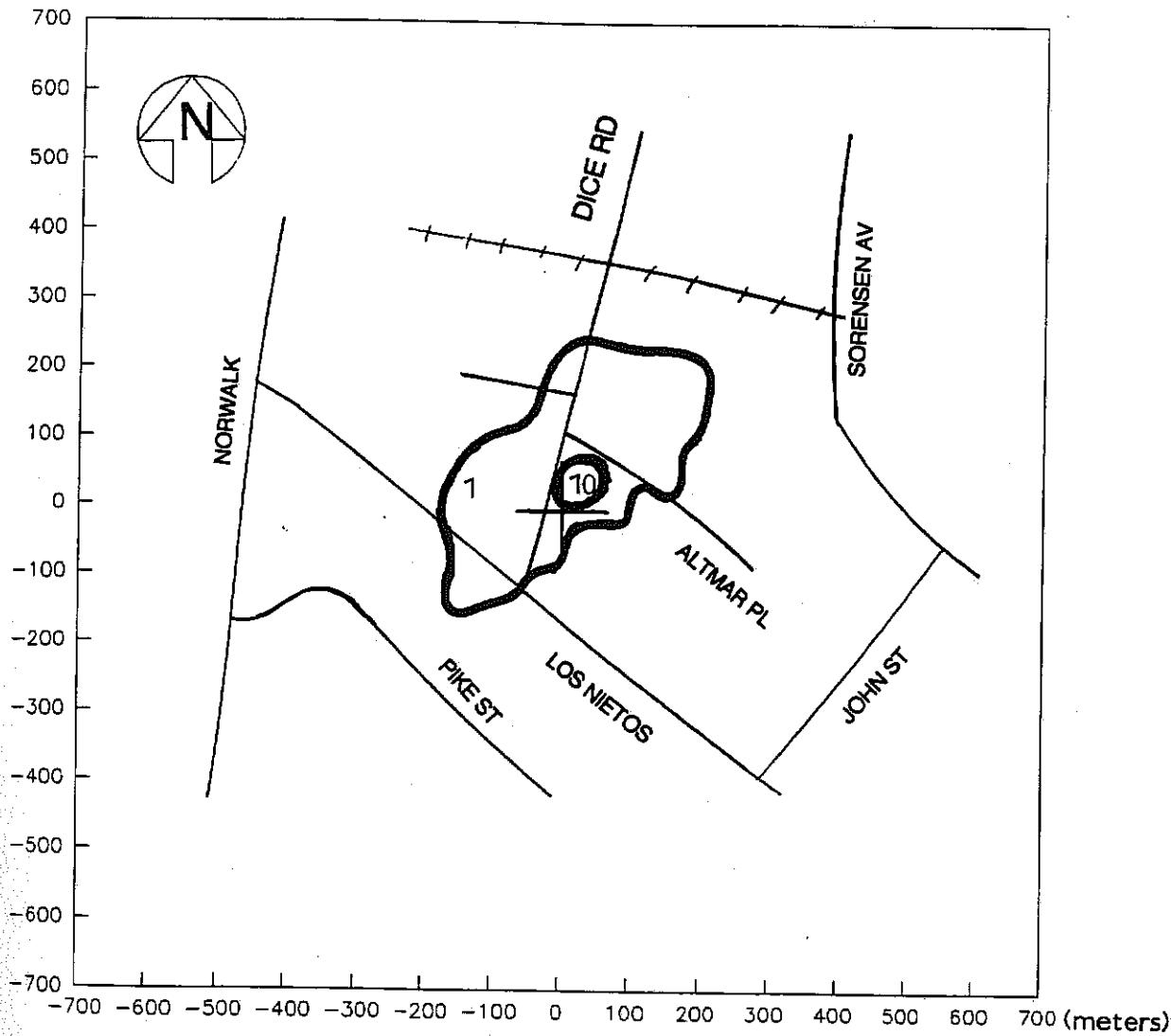


Figure 4.2  
Industrial/Commercial Cancer Risk Isopleths  
(10:1,000,000)



**APPENDIX A**

**EPA SOURCE TEST REPORT CONDUCTED AT  
ELECTRONIC CHROME & GRINDING COMPANY, INC.**

**CHROMIUM ELECTROPLATING EMISSIONS COMPARISON TEST  
(USE OF POLYPROPYLENE BALLS AND A FOAM BLANKET  
TO ENHANCE  
THE PERFORMANCE OF EXISTING CONTROL EQUIPMENT)**

**ELECTRONIC CHROME  
AND  
GRINDING COMPANY**

**Santa Fe Springs, California**

**Prepared for:**

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**EMISSION MEASUREMENT BRANCH**

**Research Triangle Park, North Carolina**

**EPA CONTRACT NO 68-D-90155**

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**December 4, 1992**

### SUMMARY OF STACK GAS CONDITIONS

#### INLET

Run No.	Velocity fpm <sup>a</sup>	Stack Temp. °F	Flow Rate		Moisture %	% Isokinetic Variation
			scfm <sup>b</sup>	dscfm <sup>c</sup>		
1	45.9845	73	2,949.48	2,903.95	1.1417	99.6725
2	47.4476	75	3,043.33	2,982.58	1.5100	98.0572
3	46.6692	76	2,993.40	2,928.86	1.3055	97.1326
4	47.8253	66	3,067.56	3,060.89	1.0094	95.9109
5	46.6225	64	2,990.41	2,994.40	0.7930	96.9894
6	44.6702	73	2,865.19	2,820.45	1.2648	96.7196
Average	46.5365	71	2,984.90	2,948.52	1.1707	97.4137

#### OUTLET

Run No.	Velocity fpm <sup>a</sup>	Stack Temp. °F	Flow Rate		Moisture %	% Isokinetic Variation
			scfm <sup>b</sup>	dscfm <sup>c</sup>		
1	18.5401	68	3,210.72	3,208.08	1.8199	109.9126
2	21.9701	74	3,804.72	3,760.21	1.7816	96.5318
3	21.4695	68	3,718.02	3,716.37	0.5611	94.5008
4	18.0805	59	3,131.12	3,182.80	1.3572	101.4518
5	20.8400	61	3,609.01	3,650.69	1.2067	94.6178
6	19.5972	74	3,393.78	3,352.49	1.4018	98.5758
Average	20.0829	67	3,477.90	3,478.44	1.3547	99.2651

<sup>a</sup>Feet per second at stack conditions

<sup>b</sup>Actual cubic feet per minute at stack conditions

<sup>c</sup>Dry standard cubic feet per minute at 68°F and 29.92" Hg

**TOTAL CHROMIUM CONCENTRATIONS  
AND  
MASS EMISSION RATES AT  
INLET USING ICP ANALYSIS**

Run No.	Total Mass Collected μg	Dry Gas Volume dscf	Volumetric Flow Rate dscfm	Emission Concentration Grain/dscf	Emission Concentration mg/dscm	Mass Emission Rate lb/hr	Mass Emission Rate Kg/hr
1*	4,555	111.5784	2,903.95	6.30 x 10 <sup>-4</sup>	1.4416	1.568 x 10 <sup>-2</sup>	7.113 x 10 <sup>-3</sup>
2*	5,346	112.7425	2,982.58	7.32 x 10 <sup>-4</sup>	1.6745	1.871 x 10 <sup>-2</sup>	8.485 x 10 <sup>-3</sup>
3*	5,829	109.6680	2,928.86	8.20 x 10 <sup>-4</sup>	1.8770	2.059 x 10 <sup>-2</sup>	9.340 x 10 <sup>-3</sup>
Average	5,243	111.3296	2,938.463	7.27 x 10 <sup>-4</sup>	1.6644	1.83 x 10 <sup>-2</sup>	8.31 x 10 <sup>-3</sup>
4**	130	113.1701	3,060.89	1.77 x 10 <sup>-3</sup>	0.0406	4.651 x 10 <sup>-4</sup>	2.110 x 10 <sup>-4</sup>
5**	104	111.9567	2,994.40	1.43 x 10 <sup>-3</sup>	0.0328	3.679 x 10 <sup>-4</sup>	1.669 x 10 <sup>-4</sup>
6**	111	105.1597	2,820.45	1.63 x 10 <sup>-3</sup>	0.0373	3.938 x 10 <sup>-4</sup>	1.786 x 10 <sup>-4</sup>
Average	115	110.0955	2,958.58	1.61 x 10 <sup>-3</sup>	0.0369	4.09 x 10 <sup>-4</sup>	1.85 x 10 <sup>-4</sup>

\* Without Foam Blanket/and Polypropylene Balls

\*\* With Foam Blanket/and Polypropylene Balls

**TABLE 3-3**  
**TOTAL CHROMIUM CONCENTRATIONS AND MASS EMISSION RATES AT  
 OUTLET USING GRAPHITE FURNACE ATOMIC ABSORPTION ANALYSIS**

Run No.	Total Mass Collected μg	Dry Gas Volume dscf	Volume Flow Rate dscfm	Emission Concentration Grain/dscf	Emission Concentration mg/dscm	Mass Emission Rate lb/hr	Mass Emission Rate Kg/hr
1*	79.80	51.9620	3,208.08	$2.37 \times 10^{-5}$	0.0542	$6.517 \times 10^{-4}$	$2.956 \times 10^{-4}$
2*	98.90	53.4904	3,760.21	$2.85 \times 10^{-5}$	0.0653	$9.196 \times 10^{-4}$	$4.171 \times 10^{-4}$
3*	86.60	51.7545	3,716.37	$2.58 \times 10^{-5}$	0.0591	$8.225 \times 10^{-4}$	$3.731 \times 10^{-4}$
Average	88.43	52.4023	3561.55	$2.60 \times 10^{-5}$	0.0595	$7.98 \times 10^{-4}$	$3.62 \times 10^{-4}$
4**	14.30	47.5841	3,182.80	$4.64 \times 10^{-6}$	0.0106	$1.265 \times 10^{-4}$	$5.739 \times 10^{-5}$
5**	11.80	50.9027	3,650.69	$3.58 \times 10^{-6}$	0.0082	$1.119 \times 10^{-4}$	$5.078 \times 10^{-5}$
6**	8.97	48.7002	3,352.49	$2.84 \times 10^{-6}$	0.0065	$8.168 \times 10^{-5}$	$3.705 \times 10^{-5}$
Average	11.69	49.0623	3,395.33	$3.69 \times 10^{-6}$	0.0084	$1.07 \times 10^{-4}$	$4.84 \times 10^{-5}$

\* Without Foam Blanket/and Polypropylene Balls

\*\* With Foam Blanket/and Polypropylene Balls

TABLE 2  
SUMMARY OF SCRUBBER REMOVAL EFFICIENCIES

Total Cr - ICP Analysis for Inlet - GFAA for Outlet

		Mass Emission Rate lb/hr	Removal Efficiency %
WOFB/PB	Run No. 1 Inlet Outlet	$1.568 \times 10^{-2}$ $6.517 \times 10^{-4}$	95.84
	Run No. 2 Inlet Outlet	$1.871 \times 10^{-2}$ $9.196 \times 10^{-4}$	95.08
	Run No. 3 Inlet Outlet	$2.059 \times 10^{-2}$ $8.225 \times 10^{-4}$	96.01
<b>Average</b>			<b>95.64</b>
WFB/PB	Run No. 4 Inlet Outlet	$4.651 \times 10^{-4}$ $1.265 \times 10^{-4}$	72.80
	Run No. 5 Inlet Outlet	$3.679 \times 10^{-4}$ $1.119 \times 10^{-4}$	69.58
	Run No. 6 Inlet Outlet	$3.938 \times 10^{-4}$ $8.168 \times 10^{-5}$	79.26
<b>Average</b>			<b>73.88</b>

**LEGEND**

WOFB/PB - Without Foam Blanket and Polypropylene Balls

WFB/PB - With Foam Blanket and Polypropylene Balls

**APPENDIX B**

**DIRECTIONAL BUILDING DIMENSIONS  
(BRZWAKE Computer Printouts)**

RBRZWAKE - ISC2  
IBM-PC VERSION (2.50)  
(C) COPYRIGHT 1989, TRINITY CONSULTANTS, INC.  
SERIAL NUMBER 8826 SOLD TO PACIFIC ENVIRONMENTAL SERV.  
RUN NAME: electro  
RUN BEGAN ON 04-15-93 AT 15:59:56

BREEZE WAKE DOWNWASH ANALYSIS - ISC2

RUN INFORMATION

\*\*\*\*\*  
Input Data File: electro.BLD  
rc Info. File: electro.DAT  
put List File: electro.OUT  
put Wake File: electro.WAK

Date: 04/15/93

pletion Time: 15:59:57

following options have been chosen:

- 1) Calculations are made for the ISCST model.
  - 2) All stacks must be within 5L to be considered for direction specific downwash.
  - 3) Downwash is calculated in 36 radial directions.
  - 4) Combining based upon Structure L.
- .. This analysis determines the direction specific downwash parameters  
the flow vector pointing in the direction listed.

and figures are converted into 8-sided figures for the downwash analysis.

Algorithms:

- 
- 0 = No Downwash  
1 = Huber-Snyder Downwash  
2 = Schulman-Scire Downwash
-

**Input Buildings**

Description	Bldg #	Bldg Ht(m)	# of Corners	X(m)	Y(m)
132 Dice Road	1	4.90	4		
				.00	.00
				.00	30.50
				25.90	30.50
128 Dice Road	2	5.20	4	25.90	.00
				4.60	30.50
				4.60	61.00
				33.50	61.00
Others	3	4.90	4	33.50	30.50
				4.60	61.00
				4.60	96.00
				33.50	96.00
				33.50	61.00

**Input Stacks**

Stack ID #	Stack #	Stack Ht(m)	X(m)	Y(m)
ACK1	1	5.79	18.59	5.49
ACK2	2	5.79	6.40	8.23
ACK3	3	5.79	12.80	19.51
ACK4	4	5.79	5.79	27.74

Downwash Structures

ecture 1: Ht= 5.20 m, MPW= 42.02 m, GEP= 13.00 m

Contains the following buildings:

Building # 2: 9128 Dice Road

The following stacks are within 5L:

Stack # 1: STACK1

Stack # 2: STACK2

Stack # 3: STACK3

Stack # 4: STACK4

ecture 2: Ht= 4.90 m, MPW= 101.68 m, GEP= 12.25 m

Contains the following buildings:

Building # 1: 9132 Dice Road

Building # 2: 9128 Dice Road

Building # 3: Others

The following stacks are within 5L:

Stack # 1: STACK1

Stack # 2: STACK2

Stack # 3: STACK3

Stack # 4: STACK4

NUMBER OF SOURCES = 4

Stack ID: STACK1 , Stack # 1

The Dominant Structure Within 5L is:  
STRUC= 1 H= 5.20 W= 42.02 GEP= 13.00

Direction Specific Building Downwash  
Degree      Structure #      Height      Width      GEP      Algorithm

10	2	4.90	39.83	12.25	2
20	2	4.90	52.85	12.25	2
30	2	4.90	66.45	12.25	2
40	2	4.90	78.02	12.25	2
50	2	4.90	87.23	12.25	2
60	2	4.90	93.79	12.25	2
70	2	4.90	97.50	12.25	2
80	2	4.90	98.24	12.25	2
90	2	4.90	96.00	12.25	2
100	2	4.90	100.36	12.25	2
110	2	4.90	101.67	12.25	2
120	2	4.90	99.89	12.25	2
130	2	4.90	95.07	12.25	2
140	2	4.90	87.37	12.25	2
150	1	5.20	40.28	13.00	2
160	1	5.20	37.59	13.00	2
170	1	5.20	33.76	13.00	2
180	1	5.20	28.90	13.00	2
190	1	5.20	33.76	13.00	2
200	1	5.20	37.59	13.00	2
210	1	5.20	40.28	13.00	2
220	2	4.90	78.02	12.25	2
230	2	4.90	87.23	12.25	2
240	2	4.90	93.79	12.25	2
250	2	4.90	97.50	12.25	2
260	2	4.90	98.24	12.25	2
270	2	4.90	96.00	12.25	2
280	2	4.90	100.36	12.25	2
290	2	4.90	101.67	12.25	2
300	2	4.90	99.89	12.25	2
310	2	4.90	95.07	12.25	2
320	2	4.90	87.37	12.25	2
330	2	4.90	77.01	12.25	2
340	2	4.90	64.31	12.25	2
350	2	4.90	49.66	12.25	2
360	2	4.90	33.50	12.25	2

Stack ID: STACK2 , Stack # 2

The Dominant Structure Within 5L is:  
STRUC= 1 H= 5.20 W= 42.02 GEP= 13.00

Degree	Structure #	Height	Width	GEP	Algorithm
10	2	4.90	39.83	12.25	2
20	2	4.90	52.85	12.25	2
30	2	4.90	66.45	12.25	2
40	2	4.90	78.02	12.25	2
50	2	4.90	87.23	12.25	2
60	2	4.90	93.79	12.25	2
70	2	4.90	97.50	12.25	2
80	2	4.90	98.24	12.25	2
90	2	4.90	96.00	12.25	2
100	2	4.90	100.36	12.25	2
110	2	4.90	101.67	12.25	2
120	2	4.90	99.89	12.25	2
130	2	4.90	95.07	12.25	2
140	2	4.90	87.37	12.25	2
150	2	4.90	77.01	12.25	2
160	2	4.90	64.31	12.25	2
170	1	5.20	33.76	13.00	2
180	1	5.20	28.90	13.00	2
190	1	5.20	33.76	13.00	2
200	1	5.20	37.59	13.00	2
210	1	5.20	40.28	13.00	2
220	1	5.20	41.74	13.00	2
230	1	5.20	41.94	13.00	2
240	2	4.90	93.79	12.25	2
250	2	4.90	97.50	12.25	2
260	2	4.90	98.24	12.25	2
270	2	4.90	96.00	12.25	2
280	2	4.90	100.36	12.25	2
290	2	4.90	101.67	12.25	2
300	2	4.90	99.89	12.25	2
310	2	4.90	95.07	12.25	2
320	2	4.90	87.37	12.25	2
330	2	4.90	77.01	12.25	2
340	2	4.90	64.31	12.25	2
350	2	4.90	49.66	12.25	2
360	2	4.90	33.50	12.25	2

Stack ID: STACK3 , Stack # 3

The Dominant Structure Within 5L is:  
STRUC= 1 H= 5.20 W= 42.02 GEP= 13.00

Degree	Structure #	Height	Width	GEP	Algorithm
10	1	5.20	33.76	13.00	2
20	1	5.20	37.59	13.00	2
30	1	5.20	40.28	13.00	2
40	1	5.20	41.74	13.00	2
50	1	5.20	41.94	13.00	2
60	1	5.20	40.86	13.00	2
70	2	4.90	97.50	12.25	2
80	2	4.90	98.24	12.25	2
90	2	4.90	96.00	12.25	2
100	2	4.90	100.36	12.25	2
110	2	4.90	101.67	12.25	2
120	2	4.90	99.89	12.25	2
130	2	4.90	95.07	12.25	2
140	1	5.20	41.74	13.00	2
150	1	5.20	40.28	13.00	2
160	1	5.20	37.59	13.00	2
170	1	5.20	33.76	13.00	2
180	1	5.20	28.90	13.00	2
190	1	5.20	33.76	13.00	2
200	1	5.20	37.59	13.00	2
210	1	5.20	40.28	13.00	2
220	1	5.20	41.74	13.00	2
230	1	5.20	41.94	13.00	2
240	1	5.20	40.86	13.00	2
250	2	4.90	97.50	12.25	2
260	2	4.90	98.24	12.25	2
270	2	4.90	96.00	12.25	2
280	2	4.90	100.36	12.25	2
290	2	4.90	101.67	12.25	2
300	2	4.90	99.89	12.25	2
310	2	4.90	95.07	12.25	2
320	1	5.20	41.74	13.00	2
330	1	5.20	40.28	13.00	2
340	1	5.20	37.59	13.00	2
350	1	5.20	33.76	13.00	2
360	2	4.90	33.50	12.25	2

Stack ID: STACK4 , Stack # 4

The Dominant Structure Within 5L is:  
STRUC= 1 H= 5.20 W= 42.02 GEP= 13.00

Degree	Structure #	Height	Width	GEP	Algorithm
10	1	5.20	33.76	13.00	2
20	1	5.20	37.59	13.00	2
30	1	5.20	40.28	13.00	2
40	1	5.20	41.74	13.00	2
50	1	5.20	41.94	13.00	2
60	1	5.20	40.86	13.00	2
70	1	5.20	38.55	13.00	2
80	1	5.20	35.06	13.00	2
90	2	4.90	96.00	12.25	2
100	1	5.20	35.06	13.00	2
110	1	5.20	38.55	13.00	2
120	1	5.20	40.86	13.00	2
130	1	5.20	41.94	13.00	2
140	1	5.20	41.74	13.00	2
150	1	5.20	40.28	13.00	2
160	1	5.20	37.59	13.00	2
170	1	5.20	33.76	13.00	2
180	1	5.20	28.90	13.00	2
190	1	5.20	33.76	13.00	2
200	1	5.20	37.59	13.00	2
210	1	5.20	40.28	13.00	2
220	1	5.20	41.74	13.00	2
230	1	5.20	41.94	13.00	2
240	1	5.20	40.86	13.00	2
250	1	5.20	38.55	13.00	2
260	1	5.20	35.06	13.00	2
270	2	4.90	96.00	12.25	2
280	1	5.20	35.06	13.00	2
290	1	5.20	38.55	13.00	2
300	1	5.20	40.86	13.00	2
310	1	5.20	41.94	13.00	2
320	1	5.20	41.74	13.00	2
330	1	5.20	40.28	13.00	2
340	1	5.20	37.59	13.00	2
350	1	5.20	33.76	13.00	2
360	1	5.20	28.90	13.00	2

RUN ENDED ON 04-15-93 AT 15:59:58

## APPENDIX C

### ISCST2 INPUT AND OUTPUT PRINTOUTS

- C-1 ELECTRO.INP (ISCST2 input file)
- C-2 ELECTRO.OUT (ISCST2 output file)
- C-3 ELEC365.FIL (Annual Average concentration due to 1 g/sec emission rate)

**APPENDIX C**

**ISCST2 INPUT AND OUTPUT PRINTOUTS**

**C-1 ELECTRO.INP (ISCST2 input file)**

CO STARTING  
 CO TITLEONE ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
 CO TITLETWO PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92  
 CO MODELOPT CONC URBAN NOCALM  
 CO AVERTIME 24 PERIOD  
 CO TERRHGTS FLAT  
 CO POLLUTID OTHER  
 CO DCAYCOEF 0.0  
 CO RUNORNOT RUN  
 CO ERRORFIL ERRORS.OUT  
 CO FINISHED

SO STARTING

\*\* SOURCE LOCATION CARDS:

	SRCID	SRCTYP	XS	YS	ZS
**	-	-	-	-	-
SO LOCATION	STACK1	POINT	18.59	5.49	0.0
SO LOCATION	STACK2	POINT	6.40	8.23	0.0
SO LOCATION	STACK3	POINT	12.80	19.51	0.0
SO LOCATION	STACK4	POINT	5.79	27.74	0.0

\*\* SOURCE PARAMETER CARDS:

	SRCID	QS	HS	TS	VS	DS
**	-	-	-	-	-	-
SO SRCPARAM	STACK1	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK2	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK3	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK4	0.25	5.79	294.	0.01	0.61

SO EMISUNIT .100000E+07 GRAMS/SECOND                   MICROGRAMS/CUBIC-METER

SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK1	5.20	5.20	5.20	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDWID	STACK1	39.83	52.85	66.45	78.02	87.23	93.79
SO BUILDWID	STACK1	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK1	95.07	87.37	40.28	37.59	33.76	28.90
SO BUILDWID	STACK1	33.76	37.59	40.28	78.02	87.23	93.79
SO BUILDWID	STACK1	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK1	95.07	87.37	77.01	64.31	49.66	33.50
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	5.20	5.20
SO BUILDHGT	STACK2	5.20	5.20	5.20	5.20	5.20	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDWID	STACK2	39.83	52.85	66.45	78.02	87.23	93.79
SO BUILDWID	STACK2	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK2	95.07	87.37	77.01	64.31	33.76	28.90
SO BUILDWID	STACK2	33.76	37.59	40.28	41.74	41.94	93.79
SO BUILDWID	STACK2	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK2	95.07	87.37	77.01	64.31	49.66	33.50
SO BUILDHGT	STACK3	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK3	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK3	4.90	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK3	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK3	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK3	4.90	5.20	5.20	5.20	5.20	4.90
SO BUILDWID	STACK3	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID	STACK3	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK3	95.07	41.74	40.28	37.59	33.76	28.90
SO BUILDWID	STACK3	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID	STACK3	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK3	95.07	41.74	40.28	37.59	33.76	33.50
SO BUILDHGT	STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK4	5.20	5.20	4.90	5.20	5.20	5.20
SO BUILDHGT	STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK4	5.20	5.20	5.20	5.20	5.20	5.20

SO BUILDHGT STACK4      5.20      5.20      4.90      5.20      5.20      5.20  
SO BUILDHGT STACK4      5.20      5.20      5.20      5.20      5.20      5.20  
SO BUILDWID STACK4      33.76      37.59      40.28      41.74      41.94      40.86  
SO BUILDWID STACK4      38.55      35.06      96.00      35.06      38.55      40.86  
SO BUILDWID STACK4      41.94      41.74      40.28      37.59      33.76      28.90  
SO BUILDWID STACK4      33.76      37.59      40.28      41.74      41.94      40.86  
SO BUILDWID STACK4      38.55      35.06      96.00      35.06      38.55      40.86  
SO SRCGROUP ALL      41.94      41.74      40.28      37.59      33.76      28.90  
SO FINISHED

RE STARTING  
RE GRIDPOLR POL STA

RE GRIDPOLR POL ORIG      0.      0.  
RE GRIDPOLR POL DIST      50.      100.      150.      200.      250.      400.      500.      1000.  
RE GRIDPOLR POL GDIR      36      10.00      10.00  
RE GRIDPOLR POL END

\*\* Closest Residential  
RE DISCCART -5.5 -6.1  
\*\* Closest Commercial/Industrial  
RE DISCCART 54.9 30.5  
RE DISCCART -46.9 0.0  
\*\* Closest School  
RE DISCCART 0.0 1100.0

RE FINISHED

ME STARTING  
ME INPUTFIL C:\MODELING\MET\PRIVERA.BIN UNIFORM  
ME ANEMHGT 10.000 METERS  
ME SURFDATA 53134 1981 SURFNAME  
ME UAIRDATA 91919 1981 UAIRNAME  
ME WINDCATS 1.54 3.09 5.14 8.23 10.80  
ME FINISHED

OU STARTING  
OU RECTABLE ALLAVE FIRST  
OU POSTFILE PERIOD ALL PLOT ELEC365.FIL  
OU PLOTFILE 24 ALL FIRST ELEC24.FIL  
OU FINISHED

**APPENDIX C**

**ISCST2 INPUT AND OUTPUT PRINTOUTS**

**C-2 ELECTRO.OUT (ISCST2 output file)**

CO STARTING  
CO TITLE: MO PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92  
CO MODELOPT CONC URBAN NOCALM  
CO AVERTIME 24 PERIOD  
CO TERRHGTS FLAT  
CO POLLUTID OTHER  
CO DCAYCOEF 0.0  
CO RUNORNOT RUN  
CO ERRORFIL ERRORS.OUT  
CO FINISHED

SO STARTING

\*\* SOURCE LOCATION CARDS:

SO LOCATION	SRCID	SRCTYP	XS	YS	ZS
SO LOCATION	STACK1	POINT	18.59	5.49	0.0
SO LOCATION	STACK2	POINT	6.40	8.23	0.0
SO LOCATION	STACK3	POINT	12.80	19.51	0.0
SO LOCATION	STACK4	POINT	5.79	27.74	0.0

\*\* SOURCE PARAMETER CARDS:

** POINT:	SRCID	QS	HS	TS	VS	DS
SO SRCPARAM	STACK1	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK2	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK3	0.25	5.79	294.	0.01	0.61
SO SRCPARAM	STACK4	0.25	5.79	294.	0.01	0.61

SO EMISUNIT .100000E+07 GRAMS/SECOND MICROGRAMS/CUBIC-METER

SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	5.20	5.20	5.20	5.20
SO BUILDHGT	STACK1	5.20	5.20	5.20	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK1	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDWID	STACK1	39.83	52.85	66.45	78.02	87.23	93.79
SO BUILDWID	STACK1	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK1	95.07	87.37	40.28	37.59	33.76	28.90
SO BUILDWID	STACK1	33.76	37.59	40.28	78.02	87.23	93.79
SO BUILDWID	STACK1	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK1	95.07	87.37	77.01	64.31	49.66	33.50
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	5.20	5.20
SO BUILDHGT	STACK2	5.20	5.20	5.20	5.20	5.20	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT	STACK2	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDWID	STACK2	39.83	52.85	66.45	78.02	87.23	93.79
SO BUILDWID	STACK2	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID	STACK2	95.07	87.37	77.01	64.31	33.76	28.90
SO BUILDWID	STACK2	33.76	37.59	40.28	41.74	41.94	93.79
SO BUILDWID	STACK2	97.50	98.24	96.00	100.36	101.67	99.89

SO BUILDWID STACK2	95.07	87.37	77.01	66.31	49.66	33.50
SO BUILDHGT STACK3	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK3	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT STACK3	4.90	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK3	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK3	4.90	4.90	4.90	4.90	4.90	4.90
SO BUILDHGT STACK3	4.90	5.20	5.20	5.20	5.20	4.90
SO BUILDWID STACK3	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID STACK3	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID STACK3	95.07	41.74	40.28	37.59	33.76	28.90
SO BUILDWID STACK3	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID STACK3	97.50	98.24	96.00	100.36	101.67	99.89
SO BUILDWID STACK3	95.07	41.74	40.28	37.59	33.76	33.50
SO BUILDHGT STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK4	5.20	5.20	4.90	5.20	5.20	5.20
SO BUILDHGT STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDHGT STACK4	5.20	5.20	4.90	5.20	5.20	5.20
SO BUILDHGT STACK4	5.20	5.20	5.20	5.20	5.20	5.20
SO BUILDWID STACK4	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID STACK4	38.55	35.06	96.00	35.06	38.55	40.86
SO BUILDWID STACK4	41.94	41.74	40.28	37.59	33.76	28.90
SO BUILDWID STACK4	33.76	37.59	40.28	41.74	41.94	40.86
SO BUILDWID STACK4	38.55	35.06	96.00	35.06	38.55	40.86
SO BUILDWID STACK4	41.94	41.74	40.28	37.59	33.76	28.90
SO SRCGROUP ALL						
SO FINISHED						

RE STARTING  
 RE GRIDPOLR POL STA  
 RE GRIDPOLR POL ORIG      0.    0.  
 RE GRIDPOLR POL DIST      50. 100. 150. 200. 250. 400. 500. 1000.  
 RE GRIDPOLR POL GDIR      36 10.00 10.00  
 RE GRIDPOLR POL END

\*\* Closest Residential  
 RE DISCCART -5.5 -6.1  
 \*\* Closest Commercial/Industrial  
 RE DISCCART 54.9 30.5  
 RE DISCCART -46.9 0.0  
 \*\* Closest School  
 RE DISCCART 0.0 1100.0

RE FINISHED

ME STARTING  
 ME INPUTFIL C:\MODELING\MET\PRIVERA.BIN UNIFORM  
 ME ANEMHGT 10.000 METERS  
 ME SURDATA 53134 1981           SURNAME  
 ME UAIRDATA 91919 1981          UAIRNAME  
 ME WINDCATS 1.54 3.09 5.14 8.23 10.80  
 ME FINISHED

OU STARTING  
OU RECTABLE ALLAVE FIRST  
OU POSTFILE PERIOD ALL PLOT ELEC365.FIL  
OU PLOTFILE 24 ALL FIRST ELEC24.FIL  
OU FINISHED

\*\*\*\*\*  
\*\*\* SETUP Finishes Successfully \*\*\*  
\*\*\*\*\*

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NO CALM

## \*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

\*\*Model Is Setup For Calculation of Average CONCcentration Values.

\*\*Model Uses URBAN Dispersion.

\*\*Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

\*\*Model Assumes Receptors on FLAT Terrain.

\*\*Model Assumes No FLAGPOLE Receptor Heights.

\*\*Model Calculates 1 Short Term Average(s) of: 24-HR  
and Calculates PERIOD Averages

\*\*This Run Includes: 4 Source(s); 1 Source Group(s); and 292 Receptor(s)

\*\*The Model Assumes A Pollutant Type of: OTHER

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*Output Options Selected:

- Model Outputs Tables of PERIOD Averages by Receptor  
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)  
Model Outputs External File(s) of Concurrent Values for Postprocessing (POSTFILE Keyword)  
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

\*\*Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = .0000 ; Rot. Angle = .0  
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = .10000E+07  
Output Units = MICROGRAMS/CUBIC-METER

\*\*Input Runstream File: ELECTRO.INP

\*\*Detailed Error/Message File: ERRORS.OUT

; \*\*Output Print File: ELECTRO.OUT

\*\*\* TSCST2 - VERSION 92042 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\*  
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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\* POINT SOURCE DATA \*\*\*

SOURCE ID	NUMBER PART. (USER UNITS) CATS.	EMISSION RATE (METERS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
STACK1	0	.25000E+00	18.6	5.5	.0	5.79	294.00	.01	.61	YES	
STACK2	0	.25000E+00	6.4	8.2	.0	5.79	294.00	.01	.61	YES	
STACK3	0	.25000E+00	12.8	19.5	.0	5.79	294.00	.01	.61	YES	
STACK4	0	.25000E+00	5.8	27.7	.0	5.79	294.00	.01	.61	YES	

\*\*\* ESGT2 - VERSION 92002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\*  
\*\*\*

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\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

GROUP ID

SOURCE IDs

ALL STACK1 , STACK2 , STACK3 , STACK4 ,

\*\*\* ISCH2 - VERSION 92062 \*\*\*

\*\*\* ELECTROWIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92\*\*\*  
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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCLAM

## \*\*\* DIRECTION SPECIFIC BUILDING DIMENSIONS \*\*\*

## SOURCE ID: STACK1

	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	4.9,	39.8,	0	2	4.9,	52.8,	0	3	4.9,	66.5,	0	4	4.9,	78.0,	0	5	4.9,	87.2,	0	6	4.9,	93.8,	0	
7	4.9,	97.5,	0	8	4.9,	98.2,	0	9	4.9,	96.0,	0	10	4.9,	100.4,	0	11	4.9,	101.7,	0	12	4.9,	99.9,	0	
13	4.9,	95.1,	0	14	4.9,	87.4,	0	15	5.2,	40.3,	0	16	5.2,	37.6,	0	17	5.2,	33.8,	0	18	5.2,	28.9,	0	
19	5.2,	33.8,	0	20	5.2,	37.6,	0	21	5.2,	40.3,	0	22	4.9,	78.0,	0	23	4.9,	87.2,	0	24	4.9,	93.8,	0	
25	4.9,	97.5,	0	26	4.9,	98.2,	0	27	4.9,	96.0,	0	28	4.9,	100.4,	0	29	4.9,	101.7,	0	30	4.9,	99.9,	0	
31	4.9,	95.1,	0	32	4.9,	87.4,	0	33	4.9,	77.0,	0	34	4.9,	64.3,	0	35	4.9,	49.7,	0	36	4.9,	33.5,	0	

## SOURCE ID: STACK2

	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	4.9,	39.8,	0	2	4.9,	52.8,	0	3	4.9,	66.5,	0	4	4.9,	78.0,	0	5	4.9,	87.2,	0	6	4.9,	93.8,	0	
7	4.9,	97.5,	0	8	4.9,	98.2,	0	9	4.9,	96.0,	0	10	4.9,	100.4,	0	11	4.9,	101.7,	0	12	4.9,	99.9,	0	
13	4.9,	95.1,	0	14	4.9,	87.4,	0	15	4.9,	77.0,	0	16	4.9,	64.3,	0	17	5.2,	33.8,	0	18	5.2,	28.9,	0	
19	5.2,	33.8,	0	20	5.2,	37.6,	0	21	5.2,	40.3,	0	22	5.2,	41.7,	0	23	5.2,	41.9,	0	24	4.9,	93.8,	0	
25	4.9,	97.5,	0	26	4.9,	98.2,	0	27	4.9,	96.0,	0	28	4.9,	100.4,	0	29	4.9,	101.7,	0	30	4.9,	99.9,	0	
31	4.9,	95.1,	0	32	4.9,	87.4,	0	33	4.9,	77.0,	0	34	4.9,	64.3,	0	35	4.9,	49.7,	0	36	4.9,	33.5,	0	

## SOURCE ID: STACK3

	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	5.2,	33.8,	0	2	5.2,	37.6,	0	3	5.2,	40.3,	0	4	5.2,	41.7,	0	5	5.2,	41.9,	0	6	5.2,	40.9,	0	
7	4.9,	97.5,	0	8	4.9,	98.2,	0	9	4.9,	96.0,	0	10	4.9,	100.4,	0	11	4.9,	101.7,	0	12	4.9,	99.9,	0	
13	4.9,	95.1,	0	14	5.2,	41.7,	0	15	5.2,	40.3,	0	16	5.2,	37.6,	0	17	5.2,	33.8,	0	18	5.2,	28.9,	0	
19	5.2,	33.8,	0	20	5.2,	37.6,	0	21	5.2,	40.3,	0	22	5.2,	41.7,	0	23	5.2,	41.9,	0	24	5.2,	40.9,	0	
25	4.9,	97.5,	0	26	4.9,	98.2,	0	27	4.9,	96.0,	0	28	4.9,	100.4,	0	29	4.9,	101.7,	0	30	4.9,	99.9,	0	
31	4.9,	95.1,	0	32	5.2,	41.7,	0	33	5.2,	40.3,	0	34	5.2,	37.6,	0	35	5.2,	33.8,	0	36	4.9,	33.5,	0	

## SOURCE ID: STACK4

	IFV	BH	BW	WAK																				
1	5.2,	33.8,	0	2	5.2,	37.6,	0	3	5.2,	40.3,	0	4	5.2,	41.7,	0	5	5.2,	41.9,	0	6	5.2,	40.9,	0	
7	5.2,	38.5,	0	8	5.2,	35.1,	0	9	4.9,	96.0,	0	10	5.2,	35.1,	0	11	5.2,	38.5,	0	12	5.2,	40.9,	0	
13	5.2,	41.9,	0	14	5.2,	41.7,	0	15	5.2,	40.3,	0	16	5.2,	37.6,	0	17	5.2,	33.8,	0	18	5.2,	28.9,	0	
19	5.2,	33.8,	0	20	5.2,	37.6,	0	21	5.2,	40.3,	0	22	5.2,	41.7,	0	23	5.2,	41.9,	0	24	5.2,	40.9,	0	
25	5.2,	38.5,	0	26	5.2,	35.1,	0	27	4.9,	96.0,	0	28	5.2,	35.1,	0	29	5.2,	38.5,	0	30	5.2,	40.9,	0	
31	5.2,	41.9,	0	32	5.2,	41.7,	0	33	5.2,	40.3,	0	34	5.2,	37.6,	0	35	5.2,	33.8,	0	36	5.2,	28.9,	0	

\*\*\* ISOCOFF - VERSION 92002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\* GRIDDED RECEPTOR NETWORK SUMMARY \*\*\*

\*\*\* NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR \*\*\*

X-ORIG =            \*\*\* ORIGIN FOR POLAR NETWORK \*\*\*  
.00 ; Y-ORIG =        .00 (METERS)

\*\*\* DISTANCE RANGES OF NETWORK \*\*\*  
(METERS)

50.0,    100.0,    150.0,    200.0,    250.0,    400.0,    500.0,    1000.0,

\*\*\* DIRECTION RADIALS OF NETWORK \*\*\*  
(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

\*\*\* JOCSET2 - VERSION 92002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

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\*\*\*

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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZFLAG)  
(METERS)

( -5.5, -6.1, .0, .0);  
( -46.9, .0, .0, .0);

( 54.9, 30.5, .0, .0);  
( .0, 1100.0, .0, .0);

1988-1989 - VERSIÓN 2.0

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

二〇

04/15/9  
09:14:2  
PAGE

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NO CALM

\*\*\* METEOROLOGICAL DAYS SELECTED FOR PROCESSING \*\*\*  
(1=YES, 0=NO)

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80

\*\*\* WIND PROFILE EXPONENTS \*\*\*

\*\*\* VERTICAL POTENTIAL TEMPERATURE GRADIENTS \*\*\*  
(DEGREES KELVIN PER METER)

\*\*\* ISOSYZ - VERSION 92062 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\* THE FIRST 24 HOURS OF METEOROLOGICAL DATA \*\*\*

FILE: C:\MODELING\MET\PRIVERA.BIN  
SURFACE STATION NO.: 53134

FORMAT: UNIFORM  
UPPER AIR STATION NO.: 91919  
NAME: UAIRNAME  
YEAR: 1981

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M)	
								RURAL	URBAN
81	1	1	1	247.3	1.00	282.6	7	387.2	152.0
81	1	1	2	237.4	1.00	282.6	7	397.3	152.0
81	1	1	3	220.0	1.00	283.1	7	407.3	152.0
81	1	1	4	278.5	1.00	283.7	7	417.4	152.0
81	1	1	5	264.0	1.00	281.5	7	427.5	152.0
81	1	1	6	252.0	1.00	281.5	7	437.5	152.0
81	1	1	7	229.5	1.00	280.4	7	447.6	152.0
81	1	1	8	247.1	1.00	282.0	6	71.6	202.6
81	1	1	9	254.0	1.34	286.5	5	146.0	255.1
81	1	1	10	189.1	1.79	290.4	4	220.4	307.7
81	1	1	11	179.1	1.79	294.3	3	294.8	360.3
81	1	1	12	58.1	3.13	295.4	3	369.2	412.9
81	1	1	13	19.7	2.68	297.6	3	443.6	465.4
81	1	1	14	56.7	2.24	295.9	3	518.0	518.0
81	1	1	15	89.8	2.68	294.8	3	518.0	518.0
81	1	1	16	75.7	2.68	293.1	4	518.0	518.0
81	1	1	17	20.1	1.79	290.4	5	518.0	510.6
81	1	1	18	7.6	1.34	288.1	6	518.0	468.1
81	1	1	19	358.0	1.34	287.6	7	518.0	425.6
81	1	1	20	33.2	1.00	287.0	7	518.0	383.1
81	1	1	21	358.6	1.00	285.9	7	518.0	340.6
81	1	1	22	24.5	1.00	285.9	7	518.0	298.0
81	1	1	23	338.2	1.00	285.4	7	518.0	255.5
81	1	1	24	292.2	1.00	284.8	7	518.0	213.0

\*\*\* NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.  
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

\*\*\* F92512 - VERSION 02002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
 \*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

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NO CALM

\*\*\* THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL  
 INCLUDING SOURCE(S): STACK1 , STACK2 , STACK3 , STACK4 ,

\*\*\* NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

DIRECTION (DEGREES)	50.00	100.00	150.00	DISTANCE (METERS)				500.00	1000.00
				200.00	250.00	400.00			
10.00	345.16050	145.05300	69.80518	40.69563	26.71081	11.07710	7.34278	2.12910	
20.00	447.33770	145.14000	67.32339	38.71608	25.22164	10.32901	6.80727	1.93286	
30.00	530.14750	176.57810	81.56665	46.86798	30.52792	12.50808	8.24792	2.35075	
40.00	531.18560	210.03260	99.15887	57.13943	37.22205	15.23454	10.04278	2.86790	
50.00	450.70190	184.51130	91.36755	54.07016	35.74403	14.92429	9.90271	2.87643	
60.00	343.22080	124.82160	58.83493	34.09332	22.33028	9.20820	6.06927	1.70247	
70.00	212.71900	82.02583	40.65491	24.04638	15.85961	6.54798	4.30884	1.20819	
80.00	129.78870	53.46142	26.59356	15.84433	10.54609	4.44675	2.95071	.84055	
90.00	83.57783	34.40682	17.79207	10.72170	7.14478	2.98761	1.97040	.55009	
100.00	57.75013	21.60069	11.22463	6.91160	4.69609	2.03790	1.36372	.39502	
110.00	50.10683	16.91751	7.99039	4.66988	3.07624	1.27388	.83748	.22977	
120.00	40.62215	16.80092	8.10035	4.68273	3.04193	1.22262	.79479	.21410	
130.00	31.28975	13.89538	7.57092	4.67539	3.15911	1.34840	.89625	.25661	
140.00	26.96821	10.18521	5.38014	3.36143	2.31249	1.02984	.69699	.20887	
150.00	27.42481	9.15153	4.62792	2.79511	1.87285	.79251	.52465	.14728	
160.00	31.42995	9.77124	4.73296	2.80042	1.85659	.77608	.51242	.14355	
170.00	39.62891	12.13331	5.87917	3.47207	2.29659	.95564	.63019	.17649	
180.00	50.86026	16.69545	8.07273	4.76711	3.15843	1.32300	.87595	.24882	
190.00	67.26799	23.64113	12.15825	7.40755	4.99785	2.15265	1.44036	.42019	
200.00	94.28857	32.14299	16.25675	9.90530	6.70823	2.92170	1.96493	.58035	
210.00	133.40450	54.16178	28.71568	17.79859	12.15373	5.34701	3.60544	1.06210	
220.00	172.98400	80.36391	45.67158	29.47695	20.67722	9.54826	6.57658	2.07628	
230.00	187.66710	87.14532	49.05247	31.43699	21.94110	10.03795	6.88643	2.14707	
240.00	177.99960	76.47452	41.48825	25.99872	17.86973	7.95710	5.39886	1.62948	
250.00	158.41170	63.07860	33.44292	20.85824	14.34162	6.42470	4.37658	1.34119	
260.00	144.53340	57.94647	31.61445	20.00472	13.86581	6.28208	4.29487	1.32370	
270.00	141.33590	61.37254	34.40941	22.07184	15.41536	7.05572	4.84053	1.50803	
280.00	148.18430	66.79676	36.79247	23.0495	15.78403	6.96828	4.71549	1.42607	
290.00	152.12010	64.57243	32.89670	19.77134	13.24816	5.69748	3.82871	1.14222	
300.00	152.99210	57.23560	28.60628	17.21441	11.52513	4.91517	3.28546	.96455	
310.00	149.34980	51.05566	24.91076	14.76792	9.84304	4.21062	2.82475	.83759	
320.00	138.19900	48.28955	24.68641	15.00368	10.09678	4.33840	2.90846	.86227	
330.00	133.79720	49.13456	23.38897	13.44061	8.72498	3.54682	2.33189	.65914	
340.00	129.97240	41.16101	19.08987	11.28800	7.54967	3.25284	2.18417	.64087	
350.00	125.30050	51.93933	30.86578	20.26748	14.30199	6.60624	4.53737	1.41229	
360.00	180.40210	114.07260	61.47398	37.53225	25.24985	10.83486	7.26306	2.15716	

\*\*\* PROPOSITION 65 IMPACT STUDY

ELECTROTECHNICAL CHROME AND GRINDING COMPANY, INC.  
PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\*

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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\* THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL  
INCLUDING SOURCE(S): STACK1 , STACK2 , STACK3 , STACK4 , \*\*\*

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
-5.50	-6.10	351.78200	54.90	30.50	252.95180
-46.90	.00	151.41030	.00	1100.00	1.83331

\*\*\* ACPT2 - VERSION 020402 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92\*\*\*  
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\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NO CALM

\*\*\* THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL \*\*\*  
INCLUDING SOURCE(S): STACK1 , STACK2 , STACK3 , STACK4 ,

\*\*\* NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

DIRECTION (DEGREES)	50.00	100.00	DISTANCE (METERS)	150.00	200.00	250.00
10.0	1162.98100 (81081824)	545.46410 (81062124)	286.26730 (81080424)	180.61150 (81071924)	124.56670 (81071924)	
20.0	1228.65500 (81071924)	623.17960 (81071924)	307.59060 (81071924)	181.00580 (81071924)	119.55750 (81071924)	
30.0	1442.66600 (81070724)	577.96750 (81070724)	286.57670 (81081724)	168.94200 (81081724)	111.38510 (81081724)	
40.0	1559.08200 (81090624)	767.37530 (81090624)	381.55560 (81090624)	228.08720 (81092024)	153.51670 (81092024)	
50.0	1214.98000 (81090624)	700.16020 (81091624)	410.85320 (81091624)	260.57500 (81091624)	178.83140 (81091624)	
60.0	930.12470 (81090724)	453.66890 (81070624)	237.80660 (81070624)	140.94600 (81070624)	92.88721 (81070624)	
70.0	739.63720 (81090724)	371.37930 (81090724)	190.84360 (81090724)	111.16580 (81082924)	73.38916 (81082924)	
80.0	480.63820 (81090724)	235.12480 (81100324)	144.27470 (81111224)	96.97041 (81111224)	69.50523 (81111224)	
90.0	442.02980 (81030724)	187.08200 (81100724)	95.50531 (81073024)	60.51807 (81073024)	41.28702 (81073024)	
100.0	419.63080 (81060224)	180.41250 (81043024)	102.13190 (81043024)	65.14578 (81100724)	47.77502 (81100724)	
110.0	631.21550 (81060224)	187.75440 (81072824)	93.14428 (81072824)	50.27001 (81072824)	31.96401 (81043024)	
120.0	538.27790 (81060224)	253.28020 (81060224)	101.20650 (81060224)	53.01700 (81102924)	38.74399 (81072824)	
130.0	318.65520 (81042524)	235.60820 (81060224)	147.33540 (81060224)	93.58298 (81060224)	63.45818 (81060224)	
140.0	274.03910 (81041524)	111.15960 (81042524)	56.93741 (81060224)	43.81232 (81060224)	34.00373 (81072724)	
150.0	279.99730 (81011224)	112.18500 (81121024)	66.91885 (81121024)	41.24609 (81121024)	27.38285 (81121024)	
160.0	536.31030 (81011224)	117.81520 (81011224)	47.22594 (81042924)	32.06364 (81110724)	23.61015 (81110724)	
170.0	619.23620 (81011224)	262.86660 (81011224)	130.00930 (81011224)	75.40317 (81011224)	48.89566 (81011224)	
180.0	516.26170 (81011224)	253.67720 (81011224)	148.17250 (81011224)	96.90903 (81011224)	68.44395 (81011224)	
190.0	579.12960 (81011024)	258.30040 (81011024)	135.64820 (81011024)	82.74194 (81011024)	55.76729 (81011024)	
200.0	514.98270 (81011024)	265.03080 (81011024)	158.24610 (81011024)	104.64620 (81011024)	74.47321 (81011024)	
210.0	652.35390 (81012424)	280.72770 (81101524)	163.28170 (81101524)	106.37520 (81101524)	75.03725 (81101524)	
220.0	652.58240 (81101424)	338.09650 (81122724)	206.93070 (81122724)	138.97660 (81122724)	100.03920 (81122724)	
230.0	877.48440 (81101424)	464.13340 (81101424)	274.12280 (81101424)	180.53270 (81101424)	128.33910 (81101424)	
240.0	853.12880 (81101424)	420.68480 (81101424)	238.42410 (81101424)	151.33360 (81101424)	104.35120 (81101424)	
250.0	736.02120 (81122624)	425.68190 (81122624)	271.05830 (81122624)	185.45230 (81122624)	134.46200 (81122624)	
260.0	825.48370 (81122624)	436.86280 (81122624)	236.59650 (81122524)	150.59030 (81122524)	104.15510 (81010724)	
270.0	839.53130 (81122524)	433.81260 (81122524)	242.69030 (81122524)	159.31900 (81122524)	114.03540 (81122524)	
280.0	974.99820 (81122524)	404.68670 (81122524)	212.91930 (81122524)	152.53260 (81011524)	114.23430 (81011524)	
290.0	700.51250 (81122524)	416.68960 (81011524)	222.42770 (81011524)	135.52070 (81032524)	104.38230 (81032524)	
300.0	637.19100 (81032524)	456.81410 (81032524)	268.88880 (81032524)	157.85590 (81032524)	105.13440 (81091924)	
310.0	682.59170 (81032524)	378.98840 (81091924)	161.66890 (81091924)	101.07990 (81061224)	72.40978 (81042724)	
320.0	734.86160 (81032524)	310.17510 (81061224)	157.29300 (81080324)	110.55560 (81080324)	78.19250 (81080324)	
330.0	651.77630 (81051624)	413.24470 (81100524)	220.83030 (81100524)	126.72540 (81100524)	80.89616 (81100524)	
340.0	754.16580 (81100524)	313.89440 (81063024)	167.39070 (81063024)	100.91850 (81063024)	67.55235 (81063024)	
350.0	926.41860 (81100524)	337.67460 (81063024)	176.09440 (81063024)	106.15780 (81063024)	71.32482 (81071524)	
360.0	920.73070 (81102524)	483.36240 (81091024)	267.02570 (81091024)	161.16650 (81062124)	112.84350 (81062124)	

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCLAM

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\*\*\* THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): STACK1 , STACK2 , STACK3 , STACK4 ,

\*\*\* NETWORK ID: POL ; NETWORK TYPE: GRIDPOL \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

DIRECTION (DEGREES)	400.00	500.00	DISTANCE (METERS)
			1000.00
10.0	55.59689 (81071924)	37.88270 (81071924)	11.88641 (81071924)
20.0	50.22780 (81071924)	33.50386 (81071924)	10.11304 (81071624)
30.0	46.46606 (81081724)	31.43313 (81121924)	9.80569 (81121924)
40.0	66.17061 (81092024)	44.56465 (81092024)	13.60644 (81092024)
50.0	79.01315 (81091624)	53.60936 (81091624)	16.68712 (81091624)
60.0	38.54887 (81070624)	25.52419 (81070624)	7.39192 (81070624)
70.0	30.97152 (81070624)	21.28741 (81070624)	6.76193 (81070624)
80.0	32.91639 (81111224)	22.84452 (81111224)	7.40728 (81111224)
90.0	17.91455 (81073024)	12.28601 (81112024)	4.18926 (81112024)
100.0	22.95121 (81100724)	15.93639 (81100724)	5.17150 (81100724)
110.0	16.72264 (81043024)	11.95980 (81043024)	4.11391 (81043024)
120.0	19.20827 (81072824)	13.52004 (81072824)	4.53365 (81072824)
130.0	26.79621 (81060224)	17.70424 (81060224)	4.99889 (81060224)
140.0	18.47214 (81072724)	13.39595 (81072724)	4.71786 (81072724)
150.0	11.54982 (81121924)	8.03640 (81082024)	2.68030 (81082024)
160.0	11.50422 (81110724)	8.05206 (81110724)	2.70089 (81112124)
170.0	19.55726 (81011224)	12.71595 (81011224)	3.45605 (81011224)
180.0	31.88885 (81011224)	22.04291 (81011224)	7.05799 (81011224)
190.0	24.00275 (81011024)	16.08685 (81011024)	5.01692 (81110824)
200.0	35.20327 (81011024)	24.48090 (81011024)	7.95007 (81011024)
210.0	35.04890 (81101524)	24.29525 (81101524)	7.86370 (81101524)
220.0	48.41261 (81122724)	34.05862 (81122724)	11.53770 (81122724)
230.0	60.68832 (81101424)	42.20917 (81101424)	13.63051 (81101424)
240.0	46.42389 (81101424)	31.47830 (81101424)	9.60604 (81112024)
250.0	65.08639 (81122624)	45.58643 (81122624)	15.06563 (81122624)
260.0	47.69468 (81010724)	32.70738 (81010724)	10.25085 (81010724)
270.0	54.89918 (81122524)	38.49999 (81122524)	12.87702 (81122524)
280.0	57.09491 (81011524)	40.24658 (81011524)	13.47933 (81011524)
290.0	54.34599 (81032524)	38.80617 (81032524)	13.31154 (81032524)
300.0	46.89499 (81091924)	31.52451 (81091924)	9.28412 (81091924)
310.0	34.54388 (81042724)	23.81195 (81042724)	7.55561 (81042724)
320.0	38.12167 (81100524)	26.65450 (81100524)	8.67321 (81100524)
330.0	31.45763 (81100524)	20.70376 (81081024)	6.56593 (81081024)
340.0	28.97057 (81063024)	19.45122 (81063024)	5.89585 (81061424)
350.0	34.06081 (81052224)	23.85064 (81052224)	7.98706 (81052224)
360.0	51.43478 (81062124)	35.26319 (81062124)	11.12408 (81062124)

\*\*\* FOCST2 - VERSION 02062 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

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\*\*\* THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL \*\*\*  
INCLUDING SOURCE(S): STACK1 , STACK2 , STACK3 , STACK4 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER

\*\*

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
-5.50	-6.10	1137.44800 (81122724)	54.90	30.50	734.96920 (81100324)
-46.90	.00	861.78340 (81122524)	.00	1100.00	9.52631 (81062124)

\*\*\* TPC972 - VERSION 920052 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

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\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 531.18560 AT (	32.14,	38.30,	.00) GP POL
	2ND HIGHEST VALUE IS 530.14750 AT (	25.00,	43.30,	.00) GP POL
	3RD HIGHEST VALUE IS 450.70190 AT (	38.30,	32.14,	.00) GP POL
	4TH HIGHEST VALUE IS 447.33770 AT (	17.10,	46.98,	.00) GP POL
	5TH HIGHEST VALUE IS 351.78200 AT (	-5.50,	-6.10,	.00) GP POL
	6TH HIGHEST VALUE IS 345.16050 AT (	8.68,	49.24,	.00) DC
				.00) GP POL

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR  
BD = BOUNDARY

\*\*\* FORTRESS - VERSION 92002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

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\*\*\* THE SUMMARY OF HIGHEST 24-HR RESULTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/CUBIC-METER \*\*

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK	GRID-ID
ALL HIGH 1ST HIGH VALUE IS 1559.08200 ON 81090624: AT (	32.14,	38.30,	.00,	.00)	GP	POL

\*\*\* RECEPTOR TYPES:  
GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR  
BD = BOUNDARY

\*\*\* ISCST2 - VERSION 92002 \*\*\*

\*\*\* ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
\*\*\* PROPOSITION 65 IMPACT STUDY: 1/1/92 - 12/31/92

\*\*\* MODELING OPTIONS USED: CONC URBAN FLAT

NOCALM

\*\*\*  
\*\*\*

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\*\*\* Message Summary For ISC2 Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 0 Warning Message(s)  
A Total of 934 Informational Message(s)  
A Total of 934 Calm Hours Identified

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\*  
\*\*\* ISCST2 Finishes Successfully \*\*\*  
\*\*\*\*\*

## **APPENDIX C**

### **ISCST2 INPUT AND OUTPUT PRINTOUTS**

**C-3 ELEC365.FIL (Annual Average concentration due to 1 g/sec emission rate)**

\* ISCST2 (92062): ELECTRONIC CHROME AND GRINDING COMPANY, INC.  
 \* MODELING OPTIONS USED:  
 \* CONC URBAN FLAT  
 \* POST/PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL  
 \* FOR A TOTAL OF 292 RECEPTORS.  
 \* FORMAT: (3(1X,F13.5),1X,F8.2,2X,A6,2X,A8,2X,1B)  
 \* X Y CONC ZELEV AVE GRP NUM HRS

X	Y	CONC	ZELEV	AVE	GRP	NUM HRS
8.68241	49.24039	345.16050	.00	PERIOD	ALL	8760
17.36482	98.48077	145.05300	.00	PERIOD	ALL	8760
26.04723	147.72120	69.80518	.00	PERIOD	ALL	8760
34.72964	196.96150	40.69563	.00	PERIOD	ALL	8760
43.41204	246.20190	26.71081	.00	PERIOD	ALL	8760
69.45927	393.92310	11.07710	.00	PERIOD	ALL	8760
86.82409	492.40390	7.34278	.00	PERIOD	ALL	8760
173.64820	984.80770	2.12910	.00	PERIOD	ALL	8760
17.10101	46.98463	447.33770	.00	PERIOD	ALL	8760
34.20201	93.96926	145.14000	.00	PERIOD	ALL	8760
51.30302	140.95390	67.32339	.00	PERIOD	ALL	8760
68.40403	187.93850	38.71608	.00	PERIOD	ALL	8760
85.50504	234.92320	25.22164	.00	PERIOD	ALL	8760
136.80810	375.87700	10.32901	.00	PERIOD	ALL	8760
171.01010	469.84630	6.80727	.00	PERIOD	ALL	8760
342.02010	939.69260	1.93286	.00	PERIOD	ALL	8760
25.00000	43.30127	530.14750	.00	PERIOD	ALL	8760
50.00000	86.60254	176.57810	.00	PERIOD	ALL	8760
75.00000	129.90380	81.56665	.00	PERIOD	ALL	8760
100.00000	173.20510	46.86798	.00	PERIOD	ALL	8760
125.00000	216.50630	30.52792	.00	PERIOD	ALL	8760
200.00000	346.41020	12.50808	.00	PERIOD	ALL	8760
250.00000	433.01270	8.24792	.00	PERIOD	ALL	8760
500.00000	866.02540	2.35075	.00	PERIOD	ALL	8760
32.13938	38.30222	531.18560	.00	PERIOD	ALL	8760
64.27876	76.60445	210.03260	.00	PERIOD	ALL	8760
96.41814	114.90670	99.15887	.00	PERIOD	ALL	8760
128.55750	153.20890	57.13943	.00	PERIOD	ALL	8760
160.69690	191.51110	37.22205	.00	PERIOD	ALL	8760
257.11510	306.41780	15.23454	.00	PERIOD	ALL	8760
321.39380	383.02220	10.04278	.00	PERIOD	ALL	8760
642.78760	766.04440	2.86790	.00	PERIOD	ALL	8760
38.30222	32.13938	450.70190	.00	PERIOD	ALL	8760
76.60445	64.27876	184.51130	.00	PERIOD	ALL	8760
114.90670	96.41814	91.36755	.00	PERIOD	ALL	8760
153.20890	128.55750	54.07016	.00	PERIOD	ALL	8760
191.51110	160.69690	35.74403	.00	PERIOD	ALL	8760
306.41780	257.11510	14.92429	.00	PERIOD	ALL	8760
383.02220	321.39380	9.90271	.00	PERIOD	ALL	8760
766.04440	642.78760	2.87643	.00	PERIOD	ALL	8760
43.30127	25.00000	343.22080	.00	PERIOD	ALL	8760
86.60254	50.00000	124.82160	.00	PERIOD	ALL	8760
129.90380	75.00000	58.83493	.00	PERIOD	ALL	8760
173.20510	99.99999	34.09332	.00	PERIOD	ALL	8760
216.50630	125.00000	22.33028	.00	PERIOD	ALL	8760
346.41020	200.00000	9.20820	.00	PERIOD	ALL	8760
433.01270	250.00000	6.06927	.00	PERIOD	ALL	8760
866.02540	500.00000	1.70247	.00	PERIOD	ALL	8760
46.98463	17.10101	212.71900	.00	PERIOD	ALL	8760
93.96926	34.20201	82.02583	.00	PERIOD	ALL	8760
140.95390	51.30302	40.65491	.00	PERIOD	ALL	8760
187.93850	68.40403	24.04638	.00	PERIOD	ALL	8760
234.92320	85.50504	15.85961	.00	PERIOD	ALL	8760
375.87700	136.80810	6.54798	.00	PERIOD	ALL	8760
469.84630	171.01010	4.30884	.00	PERIOD	ALL	8760
939.69260	342.02010	1.20819	.00	PERIOD	ALL	8760
49.24039	8.68241	129.78870	.00	PERIOD	ALL	8760
98.48077	17.36482	53.46142	.00	PERIOD	ALL	8760
147.72120	26.04723	26.59356	.00	PERIOD	ALL	8760
196.96150	34.72964	15.84433	.00	PERIOD	ALL	8760
246.20190	43.41206	10.54609	.00	PERIOD	ALL	8760

393.92310	69.45929	4.44675	.00	PERIOD	ALL	
492.40390	86.82411	2.95071	.00	PERIOD	ALL	8760
984.80770	173.64820	.84055	.00	PERIOD	ALL	8760
50.00000	.00000	83.57783	.00	PERIOD	ALL	8760
100.00000	.00000	34.40682	.00	PERIOD	ALL	8760
150.00000	-.00001	17.79207	.00	PERIOD	ALL	8760
200.00000	-.00001	10.72170	.00	PERIOD	ALL	8760
250.00000	-.00001	7.14478	.00	PERIOD	ALL	8760
400.00000	-.00002	2.98761	.00	PERIOD	ALL	8760
500.00000	-.00002	1.97040	.00	PERIOD	ALL	8760
1000.00000	-.00004	.55009	.00	PERIOD	ALL	8760
49.24039	-.8.68241	57.75013	.00	PERIOD	ALL	8760
98.48077	-.17.36482	21.60069	.00	PERIOD	ALL	8760
147.72120	-.26.04723	11.22463	.00	PERIOD	ALL	8760
196.96150	-.34.72964	6.91160	.00	PERIOD	ALL	8760
246.20190	-.43.41205	4.69609	.00	PERIOD	ALL	8760
393.92310	-.69.45927	2.03790	.00	PERIOD	ALL	8760
492.40390	-.86.82410	1.36372	.00	PERIOD	ALL	8760
984.80770	-.173.64820	.39502	.00	PERIOD	ALL	8760
46.98463	-.17.10101	50.10683	.00	PERIOD	ALL	8760
93.96926	-.34.20201	16.91751	.00	PERIOD	ALL	8760
140.95390	-.51.30302	7.99039	.00	PERIOD	ALL	8760
187.93850	-.68.40402	4.66988	.00	PERIOD	ALL	8760
234.92320	-.85.50503	3.07624	.00	PERIOD	ALL	8760
375.87700	-.136.80800	1.27388	.00	PERIOD	ALL	8760
469.84630	-.171.01010	.83748	.00	PERIOD	ALL	8760
939.69260	-.342.02010	.22977	.00	PERIOD	ALL	8760
43.30127	-.25.00000	40.62215	.00	PERIOD	ALL	8760
86.60254	-.50.00000	16.80092	.00	PERIOD	ALL	8760
129.90380	-.75.00001	8.10035	.00	PERIOD	ALL	8760
173.20510	-.100.00000	4.68273	.00	PERIOD	ALL	8760
216.50630	-.125.00000	3.04193	.00	PERIOD	ALL	8760
346.41020	-.200.00000	1.22262	.00	PERIOD	ALL	8760
433.01270	-.250.00000	.79479	.00	PERIOD	ALL	8760
866.02540	-.500.00010	.21410	.00	PERIOD	ALL	8760
38.30222	-.32.13938	31.28975	.00	PERIOD	ALL	8760
76.60445	-.64.27876	13.89538	.00	PERIOD	ALL	8760
114.90670	-.96.41814	7.57092	.00	PERIOD	ALL	8760
153.20890	-.128.55750	4.67539	.00	PERIOD	ALL	8760
191.51110	-.160.69690	3.15911	.00	PERIOD	ALL	8760
306.41780	-.257.11510	1.34840	.00	PERIOD	ALL	8760
383.02220	-.321.39380	.89625	.00	PERIOD	ALL	8760
766.04440	-.642.78760	.25661	.00	PERIOD	ALL	8760
32.13938	-.38.30222	26.96821	.00	PERIOD	ALL	8760
64.27876	-.76.60445	10.18521	.00	PERIOD	ALL	8760
96.41814	-.114.90670	5.38014	.00	PERIOD	ALL	8760
128.55750	-.153.20890	3.36143	.00	PERIOD	ALL	8760
160.69690	-.191.51110	2.31249	.00	PERIOD	ALL	8760
257.11510	-.306.41780	1.02984	.00	PERIOD	ALL	8760
321.39380	-.383.02220	.69699	.00	PERIOD	ALL	8760
642.78760	-.766.04440	.20887	.00	PERIOD	ALL	8760
25.00000	-.43.30127	27.42481	.00	PERIOD	ALL	8760
50.00000	-.86.60254	9.15153	.00	PERIOD	ALL	8760
75.00000	-.129.90380	4.62792	.00	PERIOD	ALL	8760
100.00000	-.173.20510	2.79511	.00	PERIOD	ALL	8760
125.00000	-.216.50630	1.87285	.00	PERIOD	ALL	8760
200.00000	-.346.41020	.79251	.00	PERIOD	ALL	8760
250.00000	-.433.01270	.52465	.00	PERIOD	ALL	8760
500.00000	-.866.02540	.14728	.00	PERIOD	ALL	8760
17.10101	-.46.98463	31.42995	.00	PERIOD	ALL	8760
34.20201	-.93.96926	9.77124	.00	PERIOD	ALL	8760
51.30302	-.140.95390	4.73296	.00	PERIOD	ALL	8760
68.40403	-.187.93850	2.80042	.00	PERIOD	ALL	8760
85.50504	-.234.92310	1.85659	.00	PERIOD	ALL	8760
136.80810	-.375.87700	.77608	.00	PERIOD	ALL	8760
171.01010	-.469.84630	.51242	.00	PERIOD	ALL	8760
342.02020	-.939.69260	.14355	.00	PERIOD	ALL	8760
8.68241	-.49.24039	39.62891	.00	PERIOD	ALL	8760
17.36482	-.98.48077	12.13331	.00	PERIOD	ALL	8760

26.04723	-147.72120	5.87917	.00	PERIOD	ALL	
34.72964	-196.96150	3.47207	.00	PERIOD	ALL	8760
43.41205	-246.20190	2.29659	.00	PERIOD	ALL	8760
69.45928	-393.92310	.95564	.00	PERIOD	ALL	8760
86.82410	-492.40390	.63019	.00	PERIOD	ALL	8760
173.64820	-984.80770	.17649	.00	PERIOD	ALL	8760
.00000	-50.00000	50.86026	.00	PERIOD	ALL	8760
.00000	-100.00000	16.69545	.00	PERIOD	ALL	8760
.00000	-150.00000	8.07273	.00	PERIOD	ALL	8760
.00000	-200.00000	4.76711	.00	PERIOD	ALL	8760
.00001	-250.00000	3.15843	.00	PERIOD	ALL	8760
.00001	-400.00000	1.32300	.00	PERIOD	ALL	8760
.00001	-500.00000	.87595	.00	PERIOD	ALL	8760
.00002	-1000.00000	.24882	.00	PERIOD	ALL	8760
-8.68241	-49.24039	67.26799	.00	PERIOD	ALL	8760
-17.36481	-98.48077	23.64113	.00	PERIOD	ALL	8760
-26.04722	-147.72120	12.15825	.00	PERIOD	ALL	8760
-34.72963	-196.96150	7.40755	.00	PERIOD	ALL	8760
-43.41204	-246.20190	4.99785	.00	PERIOD	ALL	8760
-69.45926	-393.92310	2.15265	.00	PERIOD	ALL	8760
-86.82407	-492.40390	1.44036	.00	PERIOD	ALL	8760
-173.64810	-984.80770	.42019	.00	PERIOD	ALL	8760
-17.10101	-46.98463	94.28857	.00	PERIOD	ALL	8760
-34.20201	-93.96926	32.14299	.00	PERIOD	ALL	8760
-51.30302	-140.95390	16.25675	.00	PERIOD	ALL	8760
-68.40402	-187.93850	9.90530	.00	PERIOD	ALL	8760
-85.50503	-234.92320	6.70823	.00	PERIOD	ALL	8760
-136.80800	-375.87700	2.92170	.00	PERIOD	ALL	8760
-171.01010	-469.84630	1.96493	.00	PERIOD	ALL	8760
-342.02010	-939.69260	.58035	.00	PERIOD	ALL	8760
-25.00000	-43.30127	133.40450	.00	PERIOD	ALL	8760
-50.00000	-86.60254	54.16178	.00	PERIOD	ALL	8760
-75.00000	-129.90380	28.71568	.00	PERIOD	ALL	8760
-99.99999	-173.20510	17.79859	.00	PERIOD	ALL	8760
-125.00000	-216.50630	12.15373	.00	PERIOD	ALL	8760
-200.00000	-346.41020	5.34701	.00	PERIOD	ALL	8760
-250.00000	-433.01270	3.60544	.00	PERIOD	ALL	8760
-500.00000	-866.02540	1.06210	.00	PERIOD	ALL	8760
-32.13938	-38.30222	172.98400	.00	PERIOD	ALL	8760
-64.27876	-76.60445	80.36391	.00	PERIOD	ALL	8760
-96.41814	-114.90670	45.67158	.00	PERIOD	ALL	8760
-128.55750	-153.20890	29.47695	.00	PERIOD	ALL	8760
-160.69690	-191.51110	20.67722	.00	PERIOD	ALL	8760
-257.11500	-306.41780	9.54826	.00	PERIOD	ALL	8760
-321.39380	-383.02220	6.57658	.00	PERIOD	ALL	8760
-642.78760	-766.04450	2.07628	.00	PERIOD	ALL	8760
-38.30222	-32.13937	187.66710	.00	PERIOD	ALL	8760
-76.60444	-64.27875	87.14532	.00	PERIOD	ALL	8760
-114.90670	-96.41812	49.05247	.00	PERIOD	ALL	8760
-153.20890	-128.55750	31.43699	.00	PERIOD	ALL	8760
-191.51110	-160.69690	21.94110	.00	PERIOD	ALL	8760
-306.41780	-257.11500	10.03795	.00	PERIOD	ALL	8760
-383.02220	-321.39370	6.88643	.00	PERIOD	ALL	8760
-766.04440	-642.78750	2.14707	.00	PERIOD	ALL	8760
-43.30127	-24.99999	177.99960	.00	PERIOD	ALL	8760
-86.60254	-49.99999	76.47452	.00	PERIOD	ALL	8760
-129.90380	-74.99998	41.48825	.00	PERIOD	ALL	8760
-173.20510	-99.99998	25.99872	.00	PERIOD	ALL	8760
-216.50630	-125.00000	17.86973	.00	PERIOD	ALL	8760
-346.41020	-200.00000	7.95710	.00	PERIOD	ALL	8760
-433.01270	-250.00000	5.39886	.00	PERIOD	ALL	8760
-866.02540	-499.99990	1.62948	.00	PERIOD	ALL	8760
-46.98463	-17.10100	158.41170	.00	PERIOD	ALL	8760
-93.96926	-34.20201	63.07860	.00	PERIOD	ALL	8760
-140.95390	-51.30301	33.44292	.00	PERIOD	ALL	8760
-187.93850	-68.40401	20.85824	.00	PERIOD	ALL	8760
-234.92320	-85.50502	14.34162	.00	PERIOD	ALL	8760
-375.87700	-136.80800	6.42470	.00	PERIOD	ALL	8760
-469.84630	-171.01000	4.37658	.00	PERIOD	ALL	8760

-939.69260	-342.02010	1.34119	.00	PERIOD	ALL	8760
-49.24039	-8.68241	144.53340	.00	PERIOD	ALL	8760
-98.48077	-17.36481	57.94647	.00	PERIOD	ALL	8760
-147.72120	-26.04722	31.61445	.00	PERIOD	ALL	8760
-196.96150	-34.72963	20.00472	.00	PERIOD	ALL	8760
-246.20190	-43.41203	13.86581	.00	PERIOD	ALL	8760
-393.92310	-69.45925	6.28208	.00	PERIOD	ALL	8760
-492.40390	-86.82407	4.29487	.00	PERIOD	ALL	8760
-984.80770	-173.64810	1.32370	.00	PERIOD	ALL	8760
-50.00000	.00000	141.33590	.00	PERIOD	ALL	8760
-100.00000	.00000	61.37254	.00	PERIOD	ALL	8760
-150.00000	.00000	34.40941	.00	PERIOD	ALL	8760
-200.00000	.00000	22.07184	.00	PERIOD	ALL	8760
-250.00000	.00000	15.41536	.00	PERIOD	ALL	8760
-400.00000	.00000	7.05572	.00	PERIOD	ALL	8760
-500.00000	.00001	4.84053	.00	PERIOD	ALL	8760
-1000.00000	.00001	1.50803	.00	PERIOD	ALL	8760
-49.24039	8.68241	148.18430	.00	PERIOD	ALL	8760
-98.48077	17.36481	66.79676	.00	PERIOD	ALL	8760
-147.72120	26.04722	36.79247	.00	PERIOD	ALL	8760
-196.96150	34.72963	23.04495	.00	PERIOD	ALL	8760
-246.20190	43.41204	15.78403	.00	PERIOD	ALL	8760
-393.92310	69.45926	6.96828	.00	PERIOD	ALL	8760
-492.40390	86.82407	4.71549	.00	PERIOD	ALL	8760
-984.80770	173.64810	1.42607	.00	PERIOD	ALL	8760
-46.98463	17.10100	152.12010	.00	PERIOD	ALL	8760
-93.96926	34.20201	64.57243	.00	PERIOD	ALL	8760
-140.95390	51.30301	32.89670	.00	PERIOD	ALL	8760
-187.93850	68.40401	19.77134	.00	PERIOD	ALL	8760
-234.92320	85.50502	13.24816	.00	PERIOD	ALL	8760
-375.87700	136.80800	5.69748	.00	PERIOD	ALL	8760
-469.84630	171.01000	3.82871	.00	PERIOD	ALL	8760
-939.69260	342.02010	1.14222	.00	PERIOD	ALL	8760
-43.30127	25.00000	152.99210	.00	PERIOD	ALL	8760
-86.60254	49.99999	57.23560	.00	PERIOD	ALL	8760
-129.90380	74.99998	28.60628	.00	PERIOD	ALL	8760
-173.20510	99.99998	17.21441	.00	PERIOD	ALL	8760
-216.50640	125.00000	11.52513	.00	PERIOD	ALL	8760
-346.41020	200.00000	4.91517	.00	PERIOD	ALL	8760
-433.01270	250.00000	3.28546	.00	PERIOD	ALL	8760
-866.02550	499.99990	.96455	.00	PERIOD	ALL	8760
-38.30222	32.13937	149.34980	.00	PERIOD	ALL	8760
-76.60445	64.27875	51.05566	.00	PERIOD	ALL	8760
-114.90670	96.41813	24.91076	.00	PERIOD	ALL	8760
-153.20890	128.55750	14.76792	.00	PERIOD	ALL	8760
-191.51110	160.69690	9.84304	.00	PERIOD	ALL	8760
-306.41780	257.11500	4.21062	.00	PERIOD	ALL	8760
-383.02220	321.39380	2.82475	.00	PERIOD	ALL	8760
-766.04450	642.78750	.83759	.00	PERIOD	ALL	8760
-32.13938	38.30222	138.19900	.00	PERIOD	ALL	8760
-64.27876	76.60443	48.28955	.00	PERIOD	ALL	8760
-96.41814	114.90670	24.68641	.00	PERIOD	ALL	8760
-128.55750	153.20890	15.00368	.00	PERIOD	ALL	8760
-160.69690	191.51110	10.09678	.00	PERIOD	ALL	8760
-257.11510	306.41770	4.33840	.00	PERIOD	ALL	8760
-321.39380	383.02220	2.90846	.00	PERIOD	ALL	8760
-642.78770	766.04430	.86227	.00	PERIOD	ALL	8760
-25.00000	43.30127	133.79720	.00	PERIOD	ALL	8760
-50.00000	86.60253	49.13456	.00	PERIOD	ALL	8760
-75.00001	129.90380	23.38897	.00	PERIOD	ALL	8760
-100.00000	173.20510	13.44061	.00	PERIOD	ALL	8760
-125.00000	216.50630	8.72498	.00	PERIOD	ALL	8760
-200.00000	346.41010	3.54682	.00	PERIOD	ALL	8760
-250.00000	433.01270	2.33189	.00	PERIOD	ALL	8760
-500.00000	866.02530	.65914	.00	PERIOD	ALL	8760
-17.10101	46.98463	129.97240	.00	PERIOD	ALL	8760
-34.20202	93.96925	41.16101	.00	PERIOD	ALL	8760
-51.30303	140.95390	19.08987	.00	PERIOD	ALL	8760
-68.40404	187.93850	11.28800	.00	PERIOD	ALL	8760

-85.50504	234.92310	7.54967	.00	PERIOD	ALL	
-136.80810	375.87700	3.25284	.00	PERIOD	ALL	8760
-171.01010	469.84630	2.18417	.00	PERIOD	ALL	8760
-342.02020	939.69260	.64087	.00	PERIOD	ALL	8760
-8.68241	49.24039	125.30050	.00	PERIOD	ALL	8760
-17.36482	98.48077	51.93933	.00	PERIOD	ALL	8760
-26.04723	147.72120	30.86578	.00	PERIOD	ALL	8760
-34.72964	196.96150	20.26748	.00	PERIOD	ALL	8760
-43.41206	246.20190	14.30199	.00	PERIOD	ALL	8760
-69.45929	393.92310	6.60624	.00	PERIOD	ALL	8760
-86.82411	492.40380	4.53737	.00	PERIOD	ALL	8760
-173.64820	984.80770	1.41229	.00	PERIOD	ALL	8760
.00000	50.00000	180.40210	.00	PERIOD	ALL	8760
.00000	100.00000	114.07260	.00	PERIOD	ALL	8760
-.00001	150.00000	61.47398	.00	PERIOD	ALL	8760
-.00001	200.00000	37.53225	.00	PERIOD	ALL	8760
-.00001	250.00000	25.24985	.00	PERIOD	ALL	8760
-.00002	400.00000	10.83486	.00	PERIOD	ALL	8760
-.00002	500.00000	7.26306	.00	PERIOD	ALL	8760
-.00005	1000.00000	2.15716	.00	PERIOD	ALL	8760
-5.50000	-6.10000	351.78200	.00	PERIOD	ALL	8760
54.90000	30.50000	252.95180	.00	PERIOD	ALL	8760
-46.90000	.00000	151.41030	.00	PERIOD	ALL	8760
.00000	1100.00000	1.83331	.00	PERIOD	ALL	8760
						8760

**APPENDIX D**

**COMMUNITY CANCER RISK**

**Community Exposure Level**

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
8.68241	49.24039	63.40598
17.36482	98.48077	26.64623
26.04723	147.72120	12.82321
34.72964	196.96150	7.47579
43.41204	246.20190	4.90677
69.45927	393.92310	2.03486
86.82409	492.40390	1.34887
173.64820	984.80770	.39112
17.10101	46.98463	82.17593
34.20201	93.96926	26.66221
51.30302	140.95390	12.36730
68.40403	187.93850	7.11214
85.50504	234.92320	4.63321
136.80810	375.87700	1.89744
171.01010	469.84630	1.25050
342.02010	939.69260	.35507
25.00000	43.30127	97.38809
50.00000	86.60254	32.43739
75.00000	129.90380	14.98379
100.00000	173.20510	8.60965
125.00000	216.50630	5.60798
200.00000	346.41020	2.29773
250.00000	433.01270	1.51514
500.00000	866.02540	.43183
32.13938	38.30222	97.57879
64.27876	76.60445	38.58298
96.41814	114.90670	18.21548
128.55750	153.20890	10.49651
160.69690	191.51110	6.83769
257.11510	306.41780	2.79858
321.39380	383.02220	1.84486
642.78760	766.04440	.52683
38.30222	32.13938	82.79393
76.60445	64.27876	33.89472
114.90670	96.41814	16.78422
153.20890	128.55750	9.93269
191.51110	160.69690	6.56618
306.41780	257.11510	2.74159
383.02220	321.39380	1.81913
766.04440	642.78760	.52840
43.30127	25.00000	63.04965
86.60254	50.00000	22.92973
129.90380	75.00000	10.80798
173.20510	99.99999	6.26294

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
216.50630	125.00000	4.10207
346.41020	200.00000	1.69155
433.01270	250.00000	1.11492
866.02540	500.00000	.31274
46.98463	17.10101	39.07647
93.96926	34.20201	15.06814
140.95390	51.30302	7.46831
187.93850	68.40403	4.41732
234.92320	85.50504	2.91341
375.87700	136.80810	1.20286
469.84630	171.01010	.79153
939.69260	342.02010	.22194
49.24039	8.68241	23.84218
98.48077	17.36482	9.82086
147.72120	26.04723	4.88524
196.96150	34.72964	2.91060
246.20190	43.41206	1.93732
393.92310	69.45929	.81687
492.40390	86.82411	.54205
984.80770	173.64820	.15441
50.00000	.00000	15.35325
100.00000	.00000	6.32053
150.00000	.00000	3.26840
200.00000	-.00001	1.96958
250.00000	-.00001	1.31250
400.00000	-.00001	.54882
500.00000	-.00002	.36196
1000.00000	-.00002	.10105
49.24039	-.00004	10.60870
98.48077	-8.68241	3.96805
147.72120	-17.36482	2.06196
196.96150	-26.04723	1.26966
246.20190	-34.72964	.86267
393.92310	-43.41205	.37436
492.40390	-69.45927	.25052
984.80770	-86.82410	.07257
46.98463	-173.64820	9.20462
93.96926	-17.10101	3.10775
140.95390	-34.20201	1.46783
187.93850	-51.30302	.85786
234.92320	-68.40402	.56511
375.87700	-85.50503	.23401
469.84630	-136.80800	.15385
939.69260	-171.01010	.04221
43.30127	-342.02010	7.46229
86.60254	-25.00000	3.08633
	-50.00000	

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
129.90380	-75.00001	1.48803
173.20510	-100.00000	.86022
216.50630	-125.00000	.55880
346.41020	-200.00000	.22460
433.01270	-250.00000	.14600
866.02540	-500.00010	.03933
38.30222	-32.13938	5.74793
76.60445	-64.27876	2.55258
114.90670	-96.41814	1.39078
153.20890	-128.55750	.85887
191.51110	-160.69690	.58033
306.41780	-257.11510	.24770
383.02220	-321.39380	.16464
766.04440	-642.78760	.04714
32.13938	-38.30222	4.95406
64.27876	-76.60445	1.87102
96.41814	-114.90670	.98833
128.55750	-153.20890	.61749
160.69690	-191.51110	.42480
257.11510	-306.41780	.18918
321.39380	-383.02220	.12804
642.78760	-766.04440	.03837
25.00000	-43.30127	5.03794
50.00000	-86.60254	1.68114
75.00000	-129.90380	.85015
100.00000	-173.20510	.51346
125.00000	-216.50630	.34404
200.00000	-346.41020	.14558
250.00000	-433.01270	.09638
500.00000	-866.02540	.02706
17.10101	-46.98463	5.77368
34.20201	-93.96926	1.79498
51.30302	-140.95390	.86944
68.40403	-187.93850	.51444
85.50504	-234.92310	.34106
136.80810	-375.87700	.14257
171.01010	-469.84630	.09413
342.02020	-939.69260	.02637
8.68241	-49.24039	7.27983
17.36482	-98.48077	2.22889
26.04723	-147.72120	1.08000
34.72964	-196.96150	.63782
43.41205	-246.20190	.42188
69.45928	-393.92310	.17555
86.82410	-492.40390	.11577
173.64820	-984.80770	.03242

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
.00000	-50.00000	9.34303
.00000	-100.00000	3.06695
.00000	-150.00000	1.48296
.00000	-200.00000	.87572
.00001	-250.00000	.58020
.00001	-400.00000	.24304
.00001	-500.00000	.16091
.00002	-1000.00000	.04571
-8.68241	-49.24039	12.35713
-17.36481	-98.48077	4.34288
-26.04722	-147.72120	2.23347
-34.72963	-196.96150	1.36077
-43.41204	-246.20190	.91810
-69.45926	-393.92310	.39544
-86.82407	-492.40390	.26459
-173.64810	-984.80770	.07719
-17.10101	-46.98463	17.32081
-34.20201	-93.96926	5.90467
-51.30302	-140.95390	2.98636
-68.40402	-187.93850	1.81960
-85.50503	-234.92320	1.23230
-136.80800	-375.87700	.53672
-171.01010	-469.84630	.36096
-342.02010	-939.69260	.10661
-25.00000	-43.30127	24.50640
-50.00000	-86.60254	9.94952
-75.00000	-129.90380	5.27507
-99.99999	-173.20510	3.26960
-125.00000	-216.50630	2.23264
-200.00000	-346.41020	.98225
-250.00000	-433.01270	.66232
-500.00000	-866.02540	.19511
-32.13938	-38.30222	31.77716
-64.27876	-76.60445	14.76285
-96.41814	-114.90670	8.38987
-128.55750	-153.20890	5.41492
-160.69690	-191.51110	3.79840
-257.11500	-306.41780	1.75402
-321.39380	-383.02220	1.20812
-642.78760	-766.04450	.38141
-38.30222	-32.13937	34.47444
-76.60444	-64.27875	16.00859
-114.90670	-96.41812	9.01094
-153.20890	-128.55750	5.77497
-191.51110	-160.69690	4.03058
-306.41780	-257.11500	1.84397

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-383.02220	-321.39370	1.26504
-766.04440	-642.78750	.39442
-43.30127	-24.99999	32.69852
-86.60254	-49.99999	14.04837
-129.90380	-74.99998	7.62139
-173.20510	-99.99998	4.77596
-216.50630	-125.00000	3.28267
-346.41020	-200.00000	1.46172
-433.01270	-250.00000	.99177
-866.02540	-499.99990	.29934
-46.98463	-17.10100	29.10023
-93.96926	-34.20201	11.58754
-140.95390	-51.30301	6.14346
-187.93850	-68.40401	3.83166
-234.92320	-85.50502	2.63456
-375.87700	-136.80800	1.18022
-469.84630	-171.01000	.80398
-939.69260	-342.02010	.24638
-49.24039	-8.68241	26.55078
-98.48077	-17.36481	10.64476
-147.72120	-26.04722	5.80757
-196.96150	-34.72963	3.67487
-246.20190	-43.41203	2.54715
-393.92310	-69.45925	1.15402
-492.40390	-86.82407	.78897
-984.80770	-173.64810	.24316
-50.00000	.00000	25.96340
-100.00000	.00000	11.27413
-150.00000	.00000	6.32101
-200.00000	.00000	4.05460
-250.00000	.00000	2.83180
-400.00000	.00000	1.29614
-500.00000	.00001	.88921
-1000.00000	.00001	.27703
-49.24039	8.68241	27.22145
-98.48077	17.36481	12.27056
-147.72120	26.04722	6.75878
-196.96150	34.72963	4.23336
-246.20190	43.41204	2.89953
-393.92310	69.45926	1.28007
-492.40390	86.82407	.86624
-984.80770	173.64810	.26197
-46.98463	17.10100	27.94446
-93.96926	34.20201	11.86195
-140.95390	51.30301	6.04312
-187.93850	68.40401	3.63199

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-234.92320	85.50502	2.43369
-375.87700	136.80800	1.04663
-469.84630	171.01000	.70333
-939.69260	342.02010	.20983
-43.30127	25.00000	28.10464
-86.60254	49.99999	10.51418
-129.90380	74.99998	5.25497
-173.20510	99.99998	3.16229
-216.50640	125.00000	2.11717
-346.41020	200.00000	.90292
-433.01270	250.00000	.60354
-866.02550	499.99990	.17719
-38.30222	32.13937	27.43555
-76.60445	64.27875	9.37892
-114.90670	96.41813	4.57611
-153.20890	128.55750	2.71287
-191.51110	160.69690	1.80817
-306.41780	257.11500	.77349
-383.02220	321.39380	.51891
-766.04450	642.78750	.15387
-32.13938	38.30222	25.38715
-64.27876	76.60443	8.87079
-96.41814	114.90670	4.53489
-128.55750	153.20890	2.75618
-160.69690	191.51110	1.85478
-257.11510	306.41770	.79696
-321.39380	383.02220	.53428
-642.78770	766.04430	.15840
-25.00000	43.30127	24.57854
-50.00000	86.60253	9.02602
-75.00001	129.90380	4.29655
-100.00000	173.20510	2.46904
-125.00000	216.50630	1.60278
-200.00000	346.41010	.65155
-250.00000	433.01270	.42837
-500.00000	866.02530	.12108
-17.10101	46.98463	23.87593
-34.20202	93.96925	7.56128
-51.30303	140.95390	3.50681
-68.40404	187.93850	2.07361
-85.50504	234.92310	1.38687
-136.80810	375.87700	.59755
-171.01010	469.84630	.40123
-342.02020	939.69260	.11773
-8.68241	49.24039	23.01770
-17.36482	98.48077	9.54125

Distance (meter)		Community Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-26.04723	147.72120	5.67004
-34.72964	196.96150	3.72314
-43.41206	246.20190	2.62728
-69.45929	393.92310	1.21357
-86.82411	492.40380	.83351
-173.64820	984.80770	.25944
.00000	50.00000	33.13986
.00000	100.00000	20.95514
-.00001	150.00000	11.29277
-.00001	200.00000	6.89467
-.00001	250.00000	4.63840
-.00002	400.00000	1.99036
-.00002	500.00000	1.33422
-.00005	1000.00000	.39627
-5.50000	-6.10000	64.62235
54.90000	30.50000	46.46724
-46.90000	.00000	27.81407
.00000	1100.00000	.33678

**APPENDIX E**  
**WORKER CANCER RISK**

Community Exposure Level		
Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
8.68241	49.24039	12.40855
17.36482	98.48077	5.21467
26.04723	147.72120	2.50950
34.72964	196.96150	1.46301
43.41204	246.20190	.96026
69.45927	393.92310	.39822
86.82409	492.40390	.26397
173.64820	984.80770	.07654
17.10101	46.98463	16.08183
34.20201	93.96926	5.21780
51.30302	140.95390	2.42028
68.40403	187.93850	1.39185
85.50504	234.92320	.90672
136.80810	375.87700	.37133
171.01010	469.84630	.24472
342.02010	939.69260	.06949
25.00000	43.30127	19.05885
50.00000	86.60254	6.34800
75.00000	129.90380	2.93233
100.00000	173.20510	1.68491
125.00000	216.50630	1.09748
200.00000	346.41020	.44967
250.00000	433.01270	.29651
500.00000	866.02540	.08451
32.13938	38.30222	19.09617
64.27876	76.60445	7.55069
96.41814	114.90670	3.56477
128.55750	153.20890	2.05417
160.69690	191.51110	1.33814
257.11510	306.41780	.54768
321.39380	383.02220	.36104
642.78760	766.04440	.10310
38.30222	32.13938	16.20277
76.60445	64.27876	6.63320
114.90670	96.41814	3.28467
128.55750	128.55750	1.94383
191.51110	160.69690	1.28500
306.41780	257.11510	.53653
383.02220	321.39380	.35600
766.04440	642.78760	.10341
43.30127	25.00000	12.33882
86.60254	50.00000	4.48735
129.90380	75.00000	2.11512
173.20510	99.99999	1.22566

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
216.50630	125.00000	.80278
346.41020	200.00000	.33104
433.01270	250.00000	.21819
866.02540	500.00000	.06120
46.98463	17.10101	7.64727
93.96926	34.20201	2.94884
140.95390	51.30302	1.46155
187.93850	68.40403	.86447
234.92320	85.50504	.57015
375.87700	136.80810	.23540
469.84630	171.01010	.15490
939.69260	342.02010	.04343
49.24039	8.68241	4.66592
98.48077	17.36482	1.92194
147.72120	26.04723	.95604
196.96150	34.72964	.56961
246.20190	43.41206	.37913
393.92310	69.45929	.15986
492.40390	86.82411	.10608
984.80770	173.64820	.03022
50.00000	.00000	3.00463
100.00000	.00000	1.23693
150.00000	-.00001	.63963
200.00000	-.00001	.38545
250.00000	-.00001	.25686
400.00000	-.00002	.10740
500.00000	-.00002	.07084
1000.00000	-.00004	.01978
49.24039	-8.68241	2.07612
98.48077	-17.36482	.77655
147.72120	-26.04723	.40353
196.96150	-34.72964	.24847
246.20190	-43.41205	.16882
393.92310	-69.45927	.07326
492.40390	-86.82410	.04903
984.80770	-173.64820	.01420
46.98463	-17.10101	1.80134
93.96926	-34.20201	.60819
140.95390	-51.30302	.28726
187.93850	-68.40402	.16788
234.92320	-85.50503	.11059
375.87700	-136.80800	.04580
469.84630	-171.01010	.03011
939.69260	-342.02010	.00826
43.30127	-25.00000	1.46037
86.60254	-50.00000	.60399

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
129.90380	-75.00001	.29121
173.20510	-100.00000	.16834
216.50630	-125.00000	.10936
346.41020	-200.00000	.04395
433.01270	-250.00000	.02857
866.02540	-500.00010	.00770
38.30222	-32.13938	1.12487
76.60445	-64.27876	.49954
114.90670	-96.41814	.27218
153.20890	-128.55750	.16808
191.51110	-160.69690	.11357
306.41780	-257.11510	.04848
383.02220	-321.39380	.03222
766.04440	-642.78760	.00923
32.13938	-38.30222	.96951
64.27876	-76.60445	.36616
96.41814	-114.90670	.19342
128.55750	-153.20890	.12084
160.69690	-191.51110	.08313
257.11510	-306.41780	.03702
321.39380	-383.02220	.02506
642.78760	-766.04440	.00751
25.00000	-43.30127	.98592
50.00000	-86.60254	.32900
75.00000	-129.90380	.16637
100.00000	-173.20510	.10048
125.00000	-216.50630	.06733
200.00000	-346.41020	.02849
250.00000	-433.01270	.01886
500.00000	-866.02540	.00529
17.10101	-46.98463	1.12991
34.20201	-93.96926	.35128
51.30302	-140.95390	.17015
68.40403	-187.93850	.10068
85.50504	-234.92310	.06674
136.80810	-375.87700	.02790
171.01010	-469.84630	.01842
342.02020	-939.69260	.00516
8.68241	-49.24039	1.42466
17.36482	-98.48077	.43619
26.04723	-147.72120	.21136
34.72964	-196.96150	.12482
43.41205	-246.20190	.08256
69.45928	-393.92310	.03436
86.82410	-492.40390	.02266
173.64820	-984.80770	.00634

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
.00000	-50.00000	1.82843
.00000	-100.00000	.60020
.00000	-150.00000	.29022
.00000	-200.00000	.17138
.00001	-250.00000	.11355
.00001	-400.00000	.04756
.00001	-500.00000	.03149
.00002	-1000.00000	.00895
-8.68241	-49.24039	2.41829
-17.36481	-98.48077	.84990
-26.04722	-147.72120	.43709
-34.72963	-196.96150	.26630
-43.41204	-246.20190	.17967
-69.45926	-393.92310	.07739
-86.82407	-492.40390	.05178
-173.64810	-984.80770	.01511
-17.10101	-46.98463	3.38968
-34.20201	-93.96926	1.15554
-51.30302	-140.95390	.58443
-68.40402	-187.93850	.35610
-85.50503	-234.92320	.24116
-136.80800	-375.87700	.10504
-171.01010	-469.84630	.07064
-342.02010	-939.69260	.02086
-25.00000	-43.30127	4.79590
-50.00000	-86.60254	1.94712
-75.00000	-129.90380	1.03233
-99.99999	-173.20510	.63986
-125.00000	-216.50630	.43693
-200.00000	-346.41020	.19223
-250.00000	-433.01270	.12962
-500.00000	-866.02540	.03818
-32.13938	-38.30222	6.21879
-64.27876	-76.60445	2.88909
-96.41814	-114.90670	1.64190
-128.55750	-153.20890	1.05970
-160.69690	-191.51110	.74335
-257.11500	-306.41780	.34326
-321.39380	-383.02220	.23643
-642.78760	-766.04450	.07464
-38.30222	-32.13937	6.74665
-76.60444	-64.27875	3.13288
-114.90670	-96.41812	1.76344
-153.20890	-128.55750	1.13016
-191.51110	-160.69690	.78878
-306.41780	-257.11500	.36087

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-383.02220	-321.39370	.24757
-766.04440	-642.78750	.07719
-43.30127	-24.99999	6.39910
-86.60254	-49.99999	2.74927
-129.90380	-74.99998	1.49151
-173.20510	-99.99998	.93466
-216.50630	-125.00000	.64242
-346.41020	-200.00000	.28606
-433.01270	-250.00000	.19409
-866.02540	-499.99990	.05858
-46.98463	-17.10100	5.69491
-93.96926	-34.20201	2.26768
-140.95390	-51.30301	1.20228
-187.93850	-68.40401	.74986
-234.92320	-85.50502	.51558
-375.87700	-136.80800	.23097
-469.84630	-171.01000	.15734
-939.69260	-342.02010	.04822
-49.24039	-8.68241	5.19599
-98.48077	-17.36481	2.08318
-147.72120	-26.04722	1.13654
-196.96150	-34.72963	.71917
-246.20190	-43.41203	.49848
-393.92310	-69.45925	.22584
-492.40390	-86.82407	.15440
-984.80770	-173.64810	.04759
-50.00000	.00000	5.08104
-100.00000	.00000	2.20635
-150.00000	.00000	1.23702
-200.00000	.00000	.79348
-250.00000	.00000	.55418
-400.00000	.00000	.25365
-500.00000	.00001	.17402
-1000.00000	.00001	.05421
-49.24039	8.68241	5.32724
-98.48077	17.36481	2.40135
-147.72120	26.04722	1.32269
-196.96150	34.72963	.82847
-246.20190	43.41204	.56744
-393.92310	69.45926	.25051
-492.40390	86.82407	.16952
-984.80770	173.64810	.05127
-46.98463	17.10100	5.46873
-93.96926	34.20201	2.32138
-140.95390	51.30301	1.18264
-187.93850	68.40401	.71078

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-234.92320	85.50502	.47627
-375.87700	136.80800	.20482
-469.84630	171.01000	.13764
-939.69260	342.02010	.04106
-43.30127	25.00000	5.50008
-86.60254	49.99999	2.05762
-129.90380	74.99998	1.02840
-173.20510	99.99998	.61886
-216.50640	125.00000	.41433
-346.41020	200.00000	.17670
-433.01270	250.00000	.11811
-866.02550	499.99990	.03468
-38.30222	32.13937	5.36914
-76.60445	64.27875	1.83546
-114.90670	96.41813	.89554
-153.20890	128.55750	.53091
-191.51110	160.69690	.35386
-306.41780	257.11500	.15137
-383.02220	321.39380	.10155
-766.04450	642.78750	.03011
-32.13938	38.30222	4.96827
-64.27876	76.60443	1.73601
-96.41814	114.90670	.88748
-128.55750	153.20890	.53938
-160.69690	191.51110	.36298
-257.11510	306.41770	.15597
-321.39380	383.02220	.10456
-642.78770	766.04430	.03100
-25.00000	43.30127	4.81002
-50.00000	86.60253	1.76639
-75.00001	129.90380	.84084
-100.00000	173.20510	.48319
-125.00000	216.50630	.31366
-200.00000	346.41010	.12751
-250.00000	433.01270	.08383
-500.00000	866.02530	.02370
-17.10101	46.98463	4.67252
-34.20202	93.96925	1.47974
-51.30303	140.95390	.68628
-68.40404	187.93850	.40580
-85.50504	234.92310	.27141
-136.80810	375.87700	.11694
-171.01010	469.84630	.07852
-342.02020	939.69260	.02304
-8.68241	49.24039	4.50456
-17.36482	98.48077	1.86722

Distance (meter)		Worker Place Excess Cancer Risk (x1.0E-5)
X (Northing)	Y (Easting)	
-26.04723	147.72120	1.10963
-34.72964	196.96150	.72862
-43.41206	246.20190	.51416
-69.45929	393.92310	.23749
-86.82411	492.40380	.16312
-173.64820	984.80770	.05077
.00000	50.00000	6.48547
.00000	100.00000	4.10092
.00001	150.00000	2.20999
.00001	200.00000	1.34929
.00001	250.00000	.90773
.00002	400.00000	.38951
.00002	500.00000	.26111
.00005	1000.00000	.07755
-5.50000	-6.10000	12.64660
54.90000	30.50000	9.09364
-46.90000	.00000	5.44321
.00000	1100.00000	.06591